



## H.E.F. CANADA QUARTERLY

*The Human Ecology Foundation of Canada*

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## THE HUMAN ECOLOGY FOUNDATION OF CANADA

### THE H.E.F. CANADA QUARTERLY

The HEF Canada Quarterly is a publication of The Human Ecology Foundation of Canada, a charitable organization under Canadian Law, operating on a non-profit basis. THE QUARTERLY is for people who are interested in health and its relation to our environment. It deals primarily with research in the field of clinical ecology (environmental medicine), and also describes how people have improved their health by changes in habits, diet and environment. As such, it does not offer medical advice, and we urge persons wishing to experiment with changes in their lifestyle to do so with the help and guidance of a knowledgeable physician.

### THE HUMAN ECOLOGY FOUNDATION OF CANADA

One of the purposes of the Human Ecology Foundation is to promote the free exchange of information on the prevention and treatment of ECOLOGICAL ILLNESS. People who are ecologically ill are no longer able to adapt well to common and increasing exposures in their everyday environment. They may develop a variety of chronic or acute symptoms that are brought on by substances in the air, in food, or in water.

Natural inhalants such as pollens, dust and moulds, and even natural foods may begin to affect people adversely. This aspect of the condition is often referred to as "allergy", but the many synthetic chemicals that are now common around us can also cause symptoms, and overexposure to these can trigger ecological illness even in those with no history of allergy or other sensitivity to the environment. Symptoms may be mild and merely annoying, or they may become severe enough to interfere with a person's daily activities, family life, and career.

On a local basis, HEF Branches work toward finding sources of chemically less-contaminated food, water, clothing, and household furnishings, as well as providing counselling on changes of lifestyle that may alleviate symptoms. The Foundation and all its branches would like to encourage others to become involved not only in research on the effects of environment on health, but in working toward a healthier, less-polluted environment.

### SUBSCRIPTION AND MEMBERSHIP

Membership in the Foundation includes a subscription to the HEF CANADA QUARTERLY which is published four times per year. Annual membership and subscription fee is \$20. WE INVITE NEW MEMBERS!

# PRESIDENT'S MESSAGE

I am very happy to be your new president. I am a registered nurse who was first diagnosed as being Ecologically Ill in 1981. I now work as a part-time tester for Dr. John Molot, in Ottawa. I have been on the Ottawa Executive for the past three years, two of which I was President of the Ottawa Branch. I have also been on the Board of Directors for two years.

I would like to thank Past-President, Darlene Koski, for her energy and dedication as National President. She also held the position of President of the Toronto Branch (which I'm sure was next to impossible to do). Through many trials and tribulations and illnesses, she gave her all. She also worked hard at realizing the dream of having an Ecological Conference. The conference was a huge success despite many obstacles. She always has a smile and a terrific attitude. We will surely miss Darlene as President, but, I am thrilled to know that she will remain active in the Foundation.

Now is our time and we must make use of it. Those of you who have the time and energy please give of it freely. The volunteers made the conference work. We can make ourselves known if we all work together. I hope that our next two years will be as successful as the last two years and that we will grow together.

Ecologically yours,

Lynda J. Brooks, R.N.

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The H.E.F. Canada Quarterly is a communications line that belongs to all of us. We welcome your comments and contributions, your articles and inspirations. The Deadline Date for December 1985's Quarterly is October 31.

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# ENVIRONMENTAL MEDICINE

## ECOLOGICAL ILLNESS MALADAPTATION TO THE ENVIRONMENT

by William J. Rea, M.D., P.A., et al, Environmental Health Center

In order to live, our bodies must interact daily with our environment by breathing air, drinking water and eating food. We seldom realize that the "environment" is actually made up of a variety of items foreign to our bodies' own tissues. These foreign influences include foods, drugs and indoor and outdoor chemicals, dusts, molds and pollens, as well as light and temperature. Foreign substances are chemical or physical stresses which add to our emotional stresses in making up the total load of stresses with which our bodies must constantly cope (that is, adapt). Everybody has a total load of stresses to which he or she is adapting at each moment in time.

Normally, the body is able to handle the total load without malfunctioning or becoming ill. However, in some persons, the total load becomes too large and/or the body loses some of its adaptability (e.g. through normal aging or after an acute infection or just before the menstrual period in some women); and ecological illness - i.e. adverse reactions to environmental stresses - results. Ecological illness may involve physical (e.g. asthma, hay fever, hives, arthritis, headache, etc.) symptoms. Often the symptoms can be suppressed by drugs, but the symptoms are a warning to the person that his body is not adapting properly to its total load of stresses. An ecological illness treated only with symptom-suppressing drugs may simply proceed on and produce new symptoms in other parts of the body (and brain). The drugs themselves may also cause adverse reactions. The way to stop the progress of ecological illness is to treat not the specific effects (symptoms) but rather, the specific causes (stresses) which made the patient's total load too much for his body to handle and led to the symptoms.

Ecological treatment is a long-term, cooperative effort by the patient and the physician to (1) find out the offending substances that make the critical contribution to the patient's total load; and (2) avoid or neutralize (by specific injections or sublingual drops) those offenders. Some ecological patients can lower their load sufficiently with just injection therapy for natural inhalants (like dusts, molds and pollens) or for foods. Unfortunately, environmental chemicals and pure foods themselves are often the most potent illness-producing stresses in a patient's total load, and there may be too many offenders for the problem to be treated effectively only with specific injections. Thus, a patient who has multiple food and chemical sensitivities may have to avoid specific items in his diet and environment in order to lower his total load enough to become symptom-free. For

many patients, the key to recovery from ecological illness is to lower the total stress load by avoiding or restricting exposures to all offending substances. In practical terms, patients with widespread food sensitivities must eliminate the worst offenders and systematically control their meals of all non-offending foods by the use of a Rotary Diversified Diet. Patients with widespread chemical sensitivities must avoid the offending chemicals and create a breathing environment for themselves at home and at work that suits their bodies' ability to adapt.

#### MALADAPTATION AND ADDICTION TO FOODS

Foods eaten daily are needed as sources of nutrients for survival, but they are also a major environmental stress on our bodies. The ease of realizing that you are maladapted to a food depends largely on how often you eat it. If an isolated exposure to a rarely-eaten food such as shrimp or cashew does make you sick, you usually recognize the problem and simply avoid eating it in the future. The isolated or acute food reaction may begin right at the start of the meal or hours later, even up to 24 hours after the meal. Once they begin, the symptoms from a single reaction may persist for hours or for several days while the food continues to be absorbed from your digestive system. Such acute food reactions are what you might typically consider to be "food allergy".

Chronic maladaptation to a food, which can lead to ecological illness, is more difficult to detect. In this case, the maladaptation usually develops not on the first exposure, but only after the body has been overburdened for a long time by continuous, cumulative use of the offending item. The most commonly-involved foods are those which are eaten most frequently and in the largest amounts - such as corn, wheat, milk, beef, white potato, or beet (sugar). When foods are eaten daily (or more often than once in 4 days), the development of a maladaptive reaction may remain hidden or masked by the frequency of usage. In this situation, the aftereffects of recent ingestions interact with those of each current exposure to produce chronic symptoms that may fluctuate on and off every day, with no obvious relationship to any particular food or meal. In fact, chronic maladaptation to a food can take the form of a food addiction. When the body is forced to keep on accepting a food or drug that it no longer tolerates, it tries to adapt as best it can and maintain as close to normal a condition as possible in the presence of the substance. This maladapted condition, however, leads to a physical addiction, because the body now requires the presence of the substance in order to function near-normally. As in drug or alcohol addiction, in food addiction, if a feeding is missed or delayed, the body - missing its expected or needed dose of the addicting item - goes into withdrawal, and the symptoms get worse. Then eating the food rather than avoiding it will temporarily relieve the symptoms and make the food addict feel better. As a result, the food addict may crave the food that is responsible for his chronic symptoms and never suspect the cause-effect relationship between the food and his illness.

For example, an undiagnosed egg-sensitive patient may notice that the pain of her chronic headache is briefly relieved every morning after breakfast (containing eggs), but then worsens over the rest of the day. Similarly, a depressed patient may get a temporary lift from the hamburger he has come to enjoy for lunch each day, but he may awaken with insomnia and depression in the middle of the night as his body goes into food withdrawal from beef. In another instance, the parents of a hyperactive child who is addicted to milk or corn may discover that they can temporarily quiet the boy's whining or aggressive behavior by giving him a glass of milk or a piece of candy (dextrose is corn sugar). This last situation can become very complex because the parents are not only perpetuating the physiological food addiction and its biological effects on the brain and behavior, but they are also psychologically rewarding the child with his favorite foods for misbehaving. As food addiction progresses, however, the patient may eventually be unable to relieve his symptoms even temporarily with the offending food. At that point, he may be even less aware of any relationship between specific foods and his illness because he is sick most of the time. Also, most ecologically ill patients have more than one offending item, and the multiple addictions and reactions may add together to produce symptoms to some degree around the clock.

The task of the patient and physician is to sort out the causes of the patient's illness. Apart from specific injection testing that can be done in the doctor's office, there is one basic way to test any suspected substance: avoidance followed by challenge. Avoidance unmasks or converts the chronic maladaptive reaction into an acute attack of symptoms on challenge. Thus, in the case of food maladaptation, every source of the food to be tested is completely eliminated from the diet for 4 to 7 days. This deliberate manipulation of the diet creates an isolated exposure to the test item, similar to the situation that happens with a rarely-eaten food. For the first few days off the food, the symptoms may worsen because the patient must get through this withdrawal period to break the addiction cycle and clear. On the fifth day of avoidance, the test food is then eaten in a single meal of just that one food. If the food is capable of causing symptoms, an adverse reaction to that specific meal will occur as an isolated flare-up of symptoms with an identifiable time of onset after the test meal and a recovery to the pre-meal condition within a few hours or days. This test is repeatable and reliable and will produce symptoms until avoidance on a long-term basis (3 to 6 months) has lowered the degree of sensitivity enough for the food to be tolerated again on a more restricted schedule of exposures (see description of Rotary Diet following).

The treatment diet is an extension of the diagnostic procedure, and it is called the Rotary Diversified Diet. Absolutely nothing; be it food, beverage, or seasoning; is ingested more often than once in every 4 to 7 days (rotation). Foods are spaced in time on the basis of their membership in various biological food families, and thus a wide variety of biologically

unrelated foods are used in the diet (diversification). The rotation prevents cumulative use of any one food, and the diversification prevents cross-reactions between related foods. For instance, wheat, rye and barley (malt) are in the same food family and cannot be used one day after the other. As you can see, the Rotary Diet is a systematic way to keep the stress contribution from each food and food family as low as possible. On such a schedule, all foods are eaten in the unmasked, unaddicted state, and every meal is an acute test of whether or not the maladaptation to the food has developed. Since no food is over-used, the spread of the problem to currently tolerated foods is prevented. As offending foods are identified, they are strictly eliminated from the diet for 3 to 6 months. The avoidance period generally gives the body time to recover its ability to tolerate the food again on a rotary basis. Even if a food has caused symptoms in the past, it may be re-tested after the 3 to 6 month avoidance period. If it is tolerated on a deliberate food test, then it may be safely put back into the Rotary Diet (once in 4 to 7 days). It must be emphasized, however, that once a patient has been addicted or sensitive to a food, he can never eat it again on a daily basis without reactivating the addictive process within a few days or weeks.

The Rotary Diet is an all-or-none treatment. Either you are on it completely, or you are off it. Your body will know if you cheat, and that is all that matters. The same symptom can be caused by a single chronically-eaten offending food, as by 20 foods. In fact, a food addict can no more eat "a little bit" of an offending food than an alcoholic can take one drink. Cheating or even an unintentional reaction to a food, chemical, or natural inhalant (e.g. dust) may set off an eating binge that the patient cannot easily stop, even though he will pay a heavy price in symptoms caused by the offending foods on which he binges.

Once the treatment diet is established, you must still be alert to the need to use tolerated foods in ways that you best tolerate (for example, some patients find that a particular food is best tolerated if it is hot rather than cold, whereas other patients experience the reverse). Sometimes you may be affected by the time of year - you can eat legumes (peanuts, peas, beans) most of the year without symptoms, but react to them and have to drop them temporarily during grass season (legumes and grasses can cross-react). You may also find that your total load is greater in the winter when your body must adapt to colder weather, rain, heating systems, and the added dust generated by having the heat on. Thus, some foods may not be as well tolerated during the winter as during other less stressful times of the year. The examples given above may not apply to you, but you may find other quirks in your ability to tolerate foods on rotation if you look. The more you observe and experiment during the diagnostic period, the more effective the diet that can be developed for your body's needs.

Sometimes, on a Rotary Diet, the patient has difficulty determining if a particular food caused a reaction, or if the

symptoms that were experienced after that item were left over from a previous reaction. The best strategy is to re-test every questionable food. It may help to eat it at a different time of day than it was eaten on the first test, or in a different point in the rotation, in order that it be eaten on a day of different foods from the original test day's items.

The rewards for carefully following the avoidance and Rotary Diet treatment are that you not only prevent the occurrence of symptoms now, but you also rebuild your body's adaptability for the future by giving it time to heal. At first (after diagnosis) you may barely have enough single foods to make a rotation, but after a period of months, the Rotary Diet can be expanded as tolerance to more and more foods returns. Although every food-sensitive patient must start with single-food test meals, many patients can eventually develop multiple-food meals on rotation. The variety of sources of nutrition that are systematically put into a Rotary Diet provide a more diversified source of nutrients and make it more likely that you will obtain all the necessary major and trace nutrients and elements from your foods than you would probably get from the typically repetitive daily diet that other people eat. Also, a food is not "good" for your body if it triggers an adverse ecological reaction, regardless of how valuable its nutrient content should be for the body.

X You might always keep in mind that everything you do to lower your total load helps. Diet is among the most controllable stresses on your body. Minimizing the stress from foods will move you in the direction of recovery and will rebuild your ability to tolerate or adapt to other stresses; physical, chemical, and emotional; that you cannot avoid (such as living through a cold winter, driving in traffic fumes, or raising a family).

#### HOW TO BEGIN

There are a number of steps to take in beginning the management of your diet and environment. (Refer to Vol. VII, No. 2, H.E.F. Canada Quarterly, June 1985 for 'MALADAPTATION TO CHEMICALS')

(1) Purchase chemically less contaminated foods, preferably fresh or frozen. Reliable sources of organic foods are difficult to find, and foods labelled as 'organic' are not always sufficiently uncontaminated by chemicals for an ecology patient to tolerate them. Here, persistence and trial-and-error will solve the problem.

(2) Commercial meats are sometimes tolerated if they are purchased in butcher paper (not heat-sealed plastic) and the fats are cut off before cooking. If a food is purchased in a non-heat-sealed plastic bag, it may be tolerated if unwrapped and allowed to air for a few days before use. Crisp cellophane is better tolerated than soft plastic.

(3) Foods should be stored in glass, butcher paper, cellophane wrap or aluminum foil, never in plastic wrap or plastic containers.



(4) No condiments other than uniodized sea salt are allowed (purchase at health food stores).

(5) Avoid charring and browning of foods. Cook with steam or lower temperatures. Purchase a stainless steel vegetable steamer. Cook meats, poultry or seafood by placing on a rack in an open pan which has 1/4 to 1/2 inch layer of tolerated water on the bottom, and baking or broiling (on lower rack). Foods stay juicy.

(6) Cooking should be done in stainless steel, enamel, or Pyrex glass only.

(7) Wash dishes, pots, pans, etc., only with plain Ivory soap and soapless steel wool pads or stainless steel scrubbers. Use cotton dish towels or hot paper towels for drying.

(8) Diet - Set up a spiral notebook with your rotation meal plan decided for the coming week, and shop for the necessary foods. Cook only with electric burners and oven. Ideally, remove the gas stove from the home. If this is not done, the gas stove must be shut off completely and the burners covered tightly with aluminum foil. Having the gas blown out of the lines is also very helpful. This can be done by a plumber, or anyone who has the skill to do it.

#### (9) Environment

Remove every potential chemical offender from the home. The extremely sensitive patient may still react to traces of chemicals which are stored in the house even if they are closed or otherwise sealed. Establish a completely safe haven room for the patient to detoxify him or herself, preferably the bedroom, where the patient is likely to be at least 6 out of the 24 hours a day (sleeping). Create a totally barren room, free of everything except the bed and desired wood or metal or glass furniture. Remove all clothing and other items from closets or drawers. No carpets. No books or papers. Consider purchase of a room air depolluter, made from a special design for chemically sensitive patients. Not all such equipment is tolerated by (ecologically ill) patients; consult your doctor first.

#### (10) Personal Hygiene

(a) Use baking soda (sodium bicarbonate) and/or sea salt for tooth brushing. Baking soda is also a good mouthwash.

X (b) Baking soda may be used as a deodorant.

(c) Experimentation to find a tolerated shampoo may be needed. Try pure castille soap, or Infinity Shampoo.

(d) Use a tolerated soap. Try Ivory soap, pure castille, or X Kosher Rocheach brand (coconut based) soap. Some people tolerate oatmeal/bran nature soap (health-food stores).

#### (11) Laundry

(a) Use a tolerated soap and flake it with a vegetable peeler for laundry use as detergent. Consider Amway, Basic H, Ivory soap products.

(b) Borax is a good natural mold-retardant and brightener.

(c) Arm & Hammer washing soda may also be tolerated.

(d) Note that some products are perfumed even though otherwise acceptable, such as Ivory Snow or Ivory Flakes.

(12) Clothing and Bedding

(a) Use natural fabrics, especially untreated cotton clothing. Avoid permanent press treatment and synthetic fibers. Try catalogue stores (e.g. Sears) and second-hand clothing stores for cottons.

(b) Prefer white and light pastel colors to avoid darker dyes that can cause symptoms in some patients.

(c) Obtain cotton blankets from surgical supply companies or catalogue stores. Feather pillows or pillowcases stuffed with cotton towels or blankets are best for pillows. If cotton mattress pad is unobtainable, try heavy cotton towelling.

(d) A cotton mattress or canvas sleeping cot may be needed.

(13) Household Cleaning

(a) Experimentation may be needed to find tolerated products. Start with Ivory soap, Basic H, or Amway products.

(b) Borax is a good mold-retardant and disinfectant.

(c) Try vinegar for window cleaning and for washing out chemicals from treated fabrics and other materials.

As a General Rule, older fabrics and other older items are often tolerated better than new ones by chemically-sensitive patients, because the excess chemical contaminants have had more time to wear out of the older items.

It's worth repeating that ecological treatment is a rebuilding and a healing process. Remember, you are not trying to merely hold your ground against a progressing chronic illness of unknown origin; rather, you as an ecology patient are trying to turn it around and reverse as much of the illness as possible while stopping its progress. You have the tools and the knowledge to help yourself, with the guidance and support of your doctor.

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EDITOR'S NOTE: 'Ecological Illness: Maladaptation To The Environment', was written by Doctors William J. Rea, Robert M. Stroud, Ralph E. Smiley and Donald E. Sprague, and published by The Environmental Health Center in Dallas, Texas. Refer to the June 1985 edition (Vol. VII, No. 2) of the H.E.F. Canada Quarterly for the excerpt 'Maladaptation To Chemicals'. Again, our thanks to William J. Rea, M.D., P.A., for his permission to reprint this article in two parts.

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A REPORT ON ALLERGIES  
ALLERGIES: ECOLOGICAL ILLNESS

by Stephen A. Levine, Ph.D., ALLERGY RESEARCH GROUP

Ecological Illness can be characterized as a wide range of long-lasting patterns of symptoms which result from sensitivities to several substances in the external environment, such as food chemicals, dust, and pollen. The study of individual susceptibility to such environmental agents has attracted the attention of medical specialists who have developed a field of medicine currently known as CLINICAL ECOLOGY. This specialty concerns itself with an individual's relationship to his or her environment. Clinical ecologists emphasize identifying and minimizing the effects of exposure to substances in the environment that make people ill.

Allergic reactions are probably the most frequently unrecognized cause of illness in the United States. According to a study reported in 'The Journal of Allergy and Applied Immunology', thousands of supposedly normal individuals have been screened, and 50% of them had recognizable allergy-like sensitivities. The researchers estimated that more than half of our population probably exhibits some symptoms due to these allergies. Dr. Richard Mackarness, an allergist practicing in England, estimates that 30 percent of all illness is due completely to allergy, 30% is partly due to allergy, and the remaining 40 percent is due to other causes.

Various biochemical theories attempt to explain what factors might predispose some individuals to allergy. One theory, accounting for food allergies, suggests that the body may simply not accept certain foods because the digestive enzymes (the ones required for the digestion of those foods) are not present or are not working properly in handling the metabolic transformation of the food. The food is not completely digested, and enters the blood stream where it stimulates an allergic response. Chemical sensitivities can be caused by an overload of petrochemicals (petroleum by-products) which are stored in fatty tissues. Our bodies can only tolerate a certain level of contamination before a toxic overload results, and that is when major pathology sets in. Research indicates that, if the adrenal gland is not functioning properly, allergies are likely to develop. Almost all types of allergies have been treated with temporary success by the use of the adrenal hormones ACTH and cortisone. This indicates that the adrenal glands are not synthesizing sufficient amounts of adrenal hormones.

SYMPTOMS: COULD IT BE ALLERGY?

Allergy symptoms and the allergic causes of many chronic illnesses are often overlooked by physicians. Many chronically tired individuals are in fact suffering from the way their system adapts to stress-producing factors in the environment. They are allergic, and neither their usual doctors nor

psychiatrists can help them. Many people who suffer from ALLERGIC FATIGUE also suffer from ALLERGY INDUCED TENSION. Frequently, these two symptoms alternate is what is known as the TENSION/FATIGUE SYNDROME. The fatigue is not like any normal fatigue, but is similar to that exhaustion which would result from illness. Many of these people find it difficult to carry on sustained activity of any kind, and they require unusual amounts of sleep and rest. The only noticeable symptom, in many cases, may be chronic exhaustion. This condition is frequently misunderstood and labeled as "neurosis".

Food and chemical sensitivities, in their earlier stages, may cause sensitive individuals to crave those foods and chemicals to which they are allergic. In this addictive phase of allergy, the allergen has a temporary stimulatory effect. Just as a heroin addict suffers withdrawal symptoms when the drug is withheld, allergic patients experience discomfort when they do not get the foods or chemicals to which they are addicted. The allergy-addiction phenomenon can be the cause of both mental and physical illness, with mild, severe, or acute manifestations. Advanced mental illness resulting from allergies was reported as early as 1950. The association of mental symptoms with chemical susceptibilities was reported in 1952. Some common aberrations caused by environmental agents include hyperactivity, irritability, excessive hunger and thirst, enragement, disorientation, depression, confusion, and even "schizophrenic"-seeming behavior. In a random sampling of 56 hospitalized schizophrenic patients, Dr. Marshall Mandell, an eminent allergist and author of 'Dr. Mandell's 5-Day Allergy Relief System', found that 92.2 percent were allergic to one or more common substances. When Dr. Mandell tested a group of patients diagnosed as hard-to-treat neurotics, he found that 88 percent of them were allergic to wheat, 50 % to corn, and 60 % to milk. Physical symptoms may occur in any organ of the body. The most common symptoms are aches or stiffness in joints, such as in arthritis, itching or hives on skin, head pains, migraine, fatigue, drowsiness, dizziness, lightheadedness, vertigo, hot flashes, speech problems (e.g. stuttering, stammering), muscle cramps and tremors, respiratory problems (coughing, wheezing, chest pains), rapid pulse, tachycardia, muscle stiffness, nausea, belching, cramps, hyperacidity, painful or difficult urination, blurred vision, and itchy ears.

#### FOOD ALLERGY AND OBESITY

Have you ever eaten something, an orange or an ice cream, and felt hungrier after you have eaten it? Do you ever have an urge for a certain food, and you can't seem to satisfy your hunger unless you eat the certain food? If you answer yes to either of these questions, you may have a food allergy. If you also have a weight problem, then there is a very good chance that your food allergy is the cause of your overweight condition.

Dr. Herbert Newbald, a New York psychiatrist, noticed that many allergy tests he gave his patients caused uncontrollable hunger as an allergic reaction. He suggests that most cases of obesity

are a result of food allergies. When his obese patients were placed on avoidance diets, they lost weight easily. Dr. Theron Randolph, Dr. Herbert Rinkel, and Dr. Michael Zeller of the University of Oklahoma Medical School pointed out that obesity and food allergy were directly related. Other more recent evidence shows that food allergies may cause the body to overproduce insulin and thereby create a ravenous hunger. Many people who are trying to reduce their weight by eating less continue to eat the foods to which they are allergic, and thereby continue to create a pathological hunger response.

#### DIAGNOSTIC TECHNIQUES

Office procedures are frequently used to diagnose allergies. Two methods are commonly employed by clinical ecologists. One is intradermal testing, in which extracts of the allergen are introduced into the outer layers of the skin and produce localized red areas if the person is sensitive. The other method uses sublingual drops, extracts of the foods, inhalants, or chemicals, which are placed under the tongue to see whether allergic symptoms are evoked. In this way, the incriminating foods are identified.

The most sensitive of the allergic patients are treated in an environmentally controlled hospital unit. Clinical ecology units are specially constructed of materials which do not evoke allergic responses. Patients' rooms are furnished only with natural fibers. Synthetics, plastics, and rubber accessories are avoided. Patients are usually admitted for at least a three week stay. In this strictly controlled environment, patients are fasted on spring water for four to seven days, during which the allergic symptoms actually worsen as the residues of allergens are cleared from the body. The purpose of this period of fasting in a chemical-free environment is to provide a baseline or clear state from which one can observe allergic sensitivities to specific substances.

In many cases, allergic sensitivities have been identified without the aid of a physician. Dr. Arthur Coca, the founding Medical Director of Lederle Laboratories, discovered that the pulse rate of a person who is allergic to a substance will increase, or sometimes decrease, after the individual has been exposed to a substance to which he or she is allergic. Dr. Coca could determine which foods, chemicals, or molds were causing trouble by monitoring the individual's pulse before and after exposure to these substances. This technique is frequently used, and is referred to as the "pulse test".

RAST, or Radio Allergo-Sorbent Test, involves testing for antibodies to different foods by means of analysis of a sample of blood from the patient. The interpretation of the test results is clear-cut. A positive result, finding antibodies to certain foods, definitely indicates sensitivity to that food. A negative result is not decisive.

## TREATMENT

The best treatment for food and chemical sensitivities is considered to be avoidance. Every patient with ecological illness represents an individual problem. Each has his own list of poorly-tolerated foods and chemicals. Some have problems that are easily controlled. Some must make major changes in their lives to remain symptom-free. Dr. Charles McGee lists various approaches used to control allergic sensitivities, going from the easiest to the most restrictive.

1. Simple avoidance. Making simple changes in home and lifestyle.
  2. Avoidance plus nutritional supplements and dietary manipulation. Most people using this approach are able to raise their levels of resistance to illness of all types, including allergic sensitivities.
  3. Extract therapy, using food and chemical antigen therapy.
  4. Rotation diets. Food sensitive patients can frequently tolerate test-positive foods if they are spaced far enough apart. The basic rotation diet suggests rotating foods so that the same food is not eaten twice in four days. Consideration is given to food families as well.
  5. Move to an unpolluted area.
- The most extreme level of control would include all these five methods.

Generally, the allergic person should avoid cigarette smoking and caffeine products, as well as troublesome foods. Many allergic individuals find that a reduction of carbohydrates in the diet and an increase in fats destroys many of the symptoms. Conceivably, the increased fat coats the food particles and they become less allergenic. A low carbohydrate diet means less stress on the adrenal gland. Paavo Airola emphasizes whole grains, nuts, seeds, fruits and vegetables. Clearly, in both cases, raw fruits and vegetables are encouraged, while sugars and starches are discouraged. Probably most important is the practice of food rotation. This will prevent the spread of food sensitivities, and may allow originally intolerable foods to be eaten on an infrequent basis.

## NUTRITIONAL SUPPLEMENTS

Supplementation with amino acids, vitamins, and minerals can result in increased tolerance to foods, inhalants, and even to chemical sensitivities. Betaine HCl and digestive enzymes may aid in digestion. Important supplements for allergic individuals are a high potency B-complex formula, and vitamins A, C, and E. Vitamin C should be buffered. The fine-powdered ascorbic acid is the purest form available. Coarser forms such as granules may contain more of the corn antigen. Vitamin C is usually synthesized from corn sugar. The most important trace minerals are chromium, selenium, zinc, iodine, and manganese.

For those sensitive to many foods, natural is not necessarily best in vitamins. The best of natural sources of vitamins, such as liver or yeast, may be highly allergenic. For such people, the purest synthetic vitamins are probably the safest. Total disclosure of all ingredients is, of course, essential. It is also important to know the sources of all ingredients.

For further information, write: Allergy Research Group, Nutri-Cology, Inc., P.O. Box 489, 400 Preda Street, San Leandro, California, U.S.A. 94577-0489.

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EDITOR'S NOTE: Our thanks to Dr. Stephen A. Levine, Director of Research of Nutri-Cology, Inc., for his permission to reprint the article you've just read, and future articles in upcoming editions of your H.E.F. Canada Quarterly. Dr. Levine is a biochemist whose doctoral thesis focussed on the antioxidant enzyme catalase. He became severely allergic/hypersensitive to foods and chemicals as a consequence of laboratory exposures to chemicals, and physicians informed him that he might never again lead a normal life. Dr. Levine succeeded in restoring his health to normalcy using nutrient-derived antioxidants, of which we will learn more in upcoming H.E.F. Canada Quarterlies.

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## INDUSTRIAL PRODUCTS

### WHAT'S ALL THE FUSS ABOUT FORMALDEHYDE?

by Mary Merlin Nelson

Not too long ago, the production and installation of Urea-Formaldehyde foam (UFFI) was a booming business, generating hundreds of millions of dollars a year. UFFI was installed in 80,000 Canadian and 500,000 American homes before it was banned (in December, 1980 and August, 1982 respectively). In the U.S.A., the Consumer Product Safety Commission received more than 1,600 complaints of acute health effects caused by "gassing off" of formaldehyde. Critics of the ban are quick to point out that (1) fewer than 1% of Canadian home owners with the insulation reported problems of formaldehyde sensitivity, and (2) in a government survey of 2,400 homes, 15% of homes without the insulation had higher formaldehyde levels than the average found in homes with it. "Bah, humbug", they say, "it's all the publicity that's caused this furor. Formaldehyde can't hurt you or it wouldn't have been around this long!" Perhaps it's time to take a closer look at this controversial substance.

Formaldehyde is one of the most common chemicals in industrial society. It is a hydrocarbon derivative based on methane (a primary petrochemical obtained as natural gas and from petrochemical plants and refineries); a colorless, toxic, water-soluble gas,  $\text{HCHO}$ , usually derived from methyl alcohol, and used in aqueous solution as a disinfectant and preservative. Formaldehyde is an unstable chemical, also called methanal, formol, formalin (an aqueous solution of 40% formaldehyde), or methylene oxide. Naughahyde (fake leather) is based on formaldehyde; urea-formaldehydes and melamine-formaldehydes are used for adhesives, moldings, paints, textiles, paper treatments, and hundreds of other items in daily use. Seven million pounds of formaldehyde are produced each year. In 1980, the U.S.A. used an estimated 6.4 billion pounds of formaldehyde, and its manufacture and use account for \$234 billion annually; an obvious indication that the fight against formaldehyde is going to be a long and difficult one.

First manufactured in the late 1800's, formaldehyde has been used for over one hundred years, and has been available as a cheap, bulk chemical for more than fifty years. It is basic to some 77 major industries. Phenol and formaldehyde, cross-linked, were the earliest of the truly synthetic polymers. Why, all of a sudden, are people wary of a chemical in such widespread use?

It is estimated that about 20% of the population may experience eye, nose and throat irritation from extremely low airborne concentrations of formaldehyde, and that an increasing number of people have developed sensitivities, with some "rare individuals" becoming permanently sensitized and losing immunity to it, and



many other chemical substances. Enough formaldehyde gas released into the home environment can cause acute health effects including nosebleeds, headaches, nausea, skin irritation, complaints of the upper respiratory system and gastrointestinal tract, tiredness, excessive thirst, insomnia, bronchoconstriction and asthma attacks, disorientation, vertigo, vomiting; even coma, leading to death. There is scientific speculation that formaldehyde may be a factor in the growing incidence of sudden infant death syndrome (SIDS). Research has shown that most of the population will begin to experience minor problems from formaldehyde at concentrations between 1 ppm (part per million) and 2 ppm. Between 10 and 20% will experience symptoms at lower concentrations, and a "small segment" of the population is actually allergic to formaldehyde and will have a hypersensitive reaction to it. Chronic exposure at several ppm may cause respiratory problems, and can aggravate (and in some cases, cause) asthmatic conditions. Most humans can tolerate 4 to 5 ppm for only a few minutes, and at extreme dosages (50 ppm) it is known to cause pulmonary edema and death.

For homeowners with UFFI in their walls, it is small consolation that even in non-UFFI-insulated homes, the formaldehyde toxicity levels have been found to be exceedingly high. Why? How is this toxic chemical being released into our homes and working environments? Where else is it used?

Hospitals have long used formaldehyde as a disinfectant and germicide (e.g. sterilizing surgical instruments and gloves); pathologists use it to preserve biology specimens; chemists use it in the alteration of bacterial toxins to toxoids for vaccines (e.g. Tetanus shots); researchers and morticians use it in the preservation of cadavers; glass companies use it to silver mirrors; photographers to clean and harden film emulsion; farmers to disinfect seeds before planting their crops; dentists to desensitize teeth. Office workers breathe formaldehyde emissions from copying machines; cooks breathe it from gas stoves; sewing machine operators breathe it from fabrics that have been dipped in formaldehyde to prevent creasing and strengthen a natural fibre such as cotton. Formaldehyde gas comes from plastics, air fresheners, automobile exhaust, cigarette smoke, detergents and fabric softeners, cosmetics, carpets and drapes, insecticides and fungicides, toothpastes and mouthwashes, nailpolish and newsprint and permanent-press clothes, wallboard and wallpaper, perfume and plywood and polyester fibres. The list is endless. The cumulative effects are staggering.

Formaldehyde may be the most widely used immunotoxic chemical in consumer products today, and continuing research shows it to be one of the more deadly cumulative substances threatening the ecologically ill and allergic/hypersensitive segment of society. In a speech to the consumer-industry-government forum on 'The Future of Formaldehyde In Consumer Products' (see Vol. VII, No. 2 H.E.F. Canada Quarterly, June 1985), Dr. Earon S. Davis said "the 2 or 3% figure sometimes quoted as the potential of formaldehyde hypersensitivities in our population is a gross understatement of

the larger problem. One must consider the tens of thousands of significant chemical exposures in the workplace, at home, and in the neighbourhood. We don't even know how diverse and substantial the average person's exposure might be." What you don't know CAN hurt you.

Formaldehyde is entering our bodies through inhalation, ingestion and skin absorption; and a substance which is used in the manufacture of antifreeze, explosives, embalming fluids, insect repellants and rodent poisons can hardly be good for you! Think about it the next time you slip into your easy-care pajamas and snuggle into your fake leather chair to read a book. The sweet, cloying, suffocating smell that makes you drowsy is formaldehyde gassing off into your environment. The "April fresh smell" that vents from your automatic dryer (and sends hypersensitive walkers out for an evening stroll into reaction) contains formaldehyde. That "new car smell" is formaldehyde (along with the scum on your windshield). The confusion, disorientation and irritability you feel in a clothing store (or furniture, carpet and/or drapery stores) is probably a result of formaldehyde offgassing from the assorted water-repellant, dye-fast, flame resistant, water resistant, shrinkproof and mothproof fabric finishes that are found everywhere but in the homes and environments of those who have already learned everything they ever wanted to know, and more, about formaldehyde.

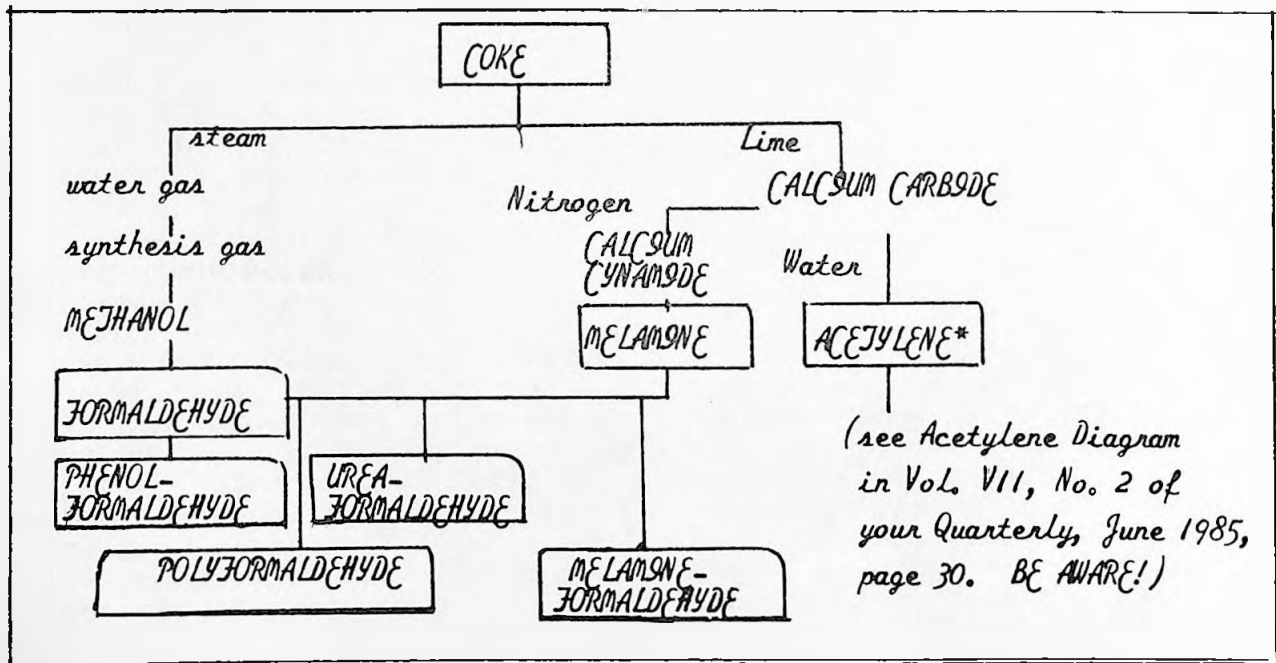
X Along with the products already mentioned, 'A Consumer Guide For The Chemically Sensitive' (by Debra Lynn Dadd and Alan S. Levin) lists nearly one hundred formaldehyde sources in Appendix 1 - Immunotoxic Chemicals In Consumer Products. Included in the list are antiperspirants, 'Bakelite', cellophane, concrete, contraceptive creams, drycleaning compounds, dyes, enamels, finger paints, fertilizers, fungicides, hair setting lotions, ball point pens and printing inks, insulation (UFFI and fibreglass), jute or hemp fibre preservative (carpet backing, area rugs, rope and twine), laminating materials, lacquers, leather tanning agents, maple syrup (injected into trees), paper towels, particleboard, pharmaceuticals, photographic film, plaster, plastic cleaners, plywood, room deodorizers (blocks and wick types), shampoos, shoe polishes, soaps, solvents, tissues, tobacco, toilet paper, varnish removers, wines, wood preservative and wood stains, panelling, and veneers. I must also add one of my primary problems, audio recording tapes, to the frightening array of things to be avoided by the formaldehyde sensitive.

If you suspect you have a formaldehyde allergy/hypersensitivity, and don't know where to begin looking for formaldehyde in your environment, the books 'Nontoxic & Natural' by Debra Lynn Dadd, and 'The Allergy Self-help Book' by Sharon Faelten (Rodale Press) will prove helpful to you. Chemically sensitive allergic people usually find themselves "gifted" with a highly acute sense of smell. Formaldehyde has a sweet, overpowering and cloying smell to it. Learn to recognize and avoid it. Hot summer weather and humidity, the heat from an automatic clothesdryer or pressing iron, and body heat alone, can trigger the "gassing off" of

formaldehyde and thereby cause an inhalant allergic reaction. The alteration of tissue proteins by formaldehyde causes local toxicity and promotes allergic reactions; repeated contact may cause an eczematoid dermatitis (e.g. from treated clothing) as a result of skin absorption. New evidence is showing that (on top of everything else) formaldehyde IS a "suspected carcinogen". We are being overloaded to the extreme, and Fear of Formaldehyde is growing in an increasing number of people. Will big business pay attention? Will industry find another (NON-toxic) substance to replace formaldehyde? Will the general public believe that what effects the ecologically ill will ultimately effect them? Will the medical establishment ever stop saying "it's impossible to be allergic to formaldehyde" and support our claims of adverse reactions? Stay tuned!

Research sources:

Goodman and Gilman's 'The Pharmacological Basis of Therapeutics', sixth edition (1980) published by Macmillan Publishing, Inc. 'Basic Organic Chemistry, Part 5, Industrial Products' by Tedder, Nechvatal and Jubb (1975) published by John Wiley & Sons. 'Nontoxic & Natural' by Debra Lynn Dadd, and 'A Consumer Guide For The Chemically Sensitive' by D.L. Dadd and A.S. Levin, M.D. Various ongoing articles and newsclippings, speeches and studies. Special thanks to Muriel Hall in Port Carling for her contributions to "Everything You Ever Wanted To Know About Formaldehyde, But Were Afraid To Ask". BE AWARE.



## A LESSON IN LABEL READING

Formaldehyde is only one of the common toxic chemicals found in our everyday lives. Thanks to the strict and stringent labelling laws in the U.S.A., I was able to learn how little we really know about what's in products we take for granted as being "harmless". What follows is a list of ingredients for a product that is easily available, commonly found in homes all over the world, and used daily, weekly, or semi-weekly by a large segment of the population. As far as I'm able, I'll give you brief definitions of the chemical, so you will better understand how it is that allergic patients can react to particular industrial products that are rarely suspected in the diagnosis of allergy. Read the list, ponder it; count the number of different chemicals, and consider what just one chemical can do to a sensitive patient. Try to figure out what it could be.

Butyl acetate (butyl is a hydrocarbon, gaseous and usually flammable; a synthetic rubber); Toluene (water soluble, flammable liquid with a benzene-like odor, obtained from coal tar and used as a solvent in the manufacture of benzoic acid, TNT, and other organic compounds); Nitrocellulose (nitric esters of cellulose used in the manufacture of lacquers and explosives); Toluenesulfonamide/Formaldehyde Resin (a sulfonamide is a sulfa-based pharmaceutical drug used chiefly in the treatment of infections; the others you know); Ethyl Acetate (a volatile, flammable liquid with a fragrant odor); Dibutyl Phthalate (a hydrocarbon formed by treating phthalic anhydride with phenols, from which certain dyes are derived); Isopropyl Alcohol (colorless, flammable, water-soluble liquid produced from propylene by the action of sulfuric acid and hydrolysis); Camphor (terpene ketone derived from camphor tree, used in medicine as a counterirritant for infections and in the treatment of itching and pain); Amyl Acetate (banana oil, sweet-smelling liquid ester derived from amyl alcohol); Butyl Benzoic Acid (benzoic acid is synthesized from phthalic acid, or toluene, or derived from benzoin or other balsams); Phthalic Anhydride (water-soluble plasticizer, hydrocarbon also used in manufacture of dyes and alkyd resins); Trimethylolethane Copolymer (trimethylene is a flammable hydrocarbon based on methane gas; a cyclo-propane, used in medicine as an anaesthetic, and in organic synthesis; a copolymer is a compound of high molecular weight produced by polymerizing two or more different monomers together; they don't try to make it easily understandable!); Acrylates Copolymer (an acrylate is a salt or ester of acrylic acid; we've talked about acrylics (Refer to Vol. VII, No. 1, H.E.F. Canada Quarterly, March 1985 - 'What Is Acrylic, and Why Do They Call It A Miracle Fiber')), so there's no need to dwell on this one); Stearalkonium Hectorite (stearic: of or pertaining to suet or fat; animal fatty acid. Hecto: used in the formation of compound words, means "hundred"); Quaternium-18 (quaternary - consisting of four); Hydroxylated Lecithin (hydroxyl group includes ethyl alcohol); Malic Acid (pertaining to or derived from apples); Citric Acid; Benzophenone-1 (benzo is a combining form indicating benzene, benzoic acid, or the presence of one or more phenyl groups in a

substance; balsam, phthalic acid or toluene can be used for synthesis; a germicide); Silica (dioxide form of silicon); Dibenzoylmethane (think methane); Isostearyl Hydrolyzed Animal Protein. The list of "May Contains" is added to this chemical brew as follows: Titanium dioxide, D&C Red #6, Barium Lake, D&C Red #7, Calcium Lake, D&C Red #34, D&C Yellow #5, Zirconium Lake, Iron Oxides, Ferric Ammonium, Ferrocyanide and Mica. There are a dozen "May Contains", and twenty basic ingredients, each of which is a combination of chemicals. Many of them are known to be toxic, or poisonous. You probably recognize the cyanide part of ferrocyanide, if nothing else.

By now, you've eliminated things like "Agent Orange" for your answer; after all, I did say it was easily available, and used in our daily lives. Is it a pesticide? It certainly sounds like a Hazardous Product. It couldn't be a new chemical weapon, although it sounds like a brew capable of destruction. If you had read that list, you wouldn't buy the product, would you? Are you ready to give up?

The mystery object is a bottle of Revlon Super Lustrous Creme Nailpolish. How could anyone be allergic to nailpolish? Let me count the ways. ALWAYS READ LABELS.

As a consumer, I have many questions, beginning with: "If we're running out of petroleum products, why are we using them in so many dangerous and unnecessary ways?"

\* \* \*

## CLAIMS PROBLEMS?

The Human Ecology Foundation is aware that a number of its members are experiencing difficulties in having medical claims honoured, mainly for allergy serums (drops) and some prescription drugs. It is reported that many insurance companies are now asking for detailed information for each patient and claim, thus swamping the doctors and unduly delaying, or rejecting what may be legitimate claims.

The Human Ecology Foundation would like to initiate whatever group action is possible to try and ameliorate this situation. It may be possible to make representations to specific provincial and federal authorities and health associations. In order to do this, specific information is required from members. If you would like to assist, the following details are required:

Name, address, phone number of patient  
Name, address of Insurance Company  
Details of claim challenged or rejected  
(i.e. type of service or drug,  
reason given for rejection,  
copy of rejection letter).

Names of members will not be cited in any representations without the express permission of the member.

Please note that testing charges for allergies is not considered reimbursable at this time.

Please send all information to: Lynda Brooks,  
President, HEF,  
97 Village Green,  
Kanata, Ontario.  
K2L 1J8

## A L L E R G Y      W O R K S H O P

### MEDICAL/SCIENTIFIC CONSIDERATIONS IN CHEMICALLY INDUCED ILLNESS

by Alan S. Levin, M.D., San Francisco, California  
(The following speech is reprinted with permission)

My topic is the medical (immunological) considerations in toxic chemical exposures. I have only a few minutes so I will outline the subject and cover each heading briefly.

1. Do the so-called toxic chemicals cause alterations of the immune system in man and animals?
2. If they do, how do they cause this damage?
3. Why are we just becoming aware of this problem?
4. How is the diagnosis of chemically induced immune dysregulation made?
5. How is the disease treated?
6. How can we prevent the disease?
7. Summarize with general considerations.

#### 1. DO THE SO-CALLED TOXIC CHEMICALS CAUSE ALTERATIONS IN THE IMMUNE SYSTEM OF MAN AND ANIMALS?

The answer is a definitive and unequivocal "yes". Large numbers of studies have been performed and are being performed showing that this is a fact.

#### 2. HOW DO THESE CHEMICALS CAUSE DAMAGE?

The immune system is a delicately balanced control mechanism which involves the activity of many cells both to induce and to inhibit reactions. Health depends upon the appropriate balance of these forces. Chemicals which can alter this balance will cause the disease immune dysregulation. Chemicals can act in many ways to cause damage. A few of these ways include:

(a) ALKYLATION OF CELLS AND PROTEINS. Many petrochemicals, both natural and synthetic, have the intrinsic ability to alkylate proteins in the peripheral circulation or in and on cells. This process damages the cell or protein, altering its function in the delicate balance of the immune system. This single event may not cause clinical symptoms. Cumulative insults to the immune system will eventually result in clinical disease. This is like damaging the autopilot of an aircraft. The damage can be overridden by the pilot. If the damage increases or the pilot tires, the plane could veer off course and crash.

(b) FREE RADICAL GENERATION. Toxic chemicals can cleave off electrons from proteins or cells causing them to become highly reactive. This causes the damaged moieties (parts) to become "glued" to other cells or proteins. The resultant damage will manifest itself the same as in the alkylation process.

(c) GENERATION OF IMMUNOGENIC AND ANTIGENIC HAPTENS. Small molecules which in themselves are incapable of inducing an immune reaction, bind to larger molecules. This binding causes the small molecule to become capable of inducing an immune reaction. Incidentally, proteins and cells which have been damaged by alkylation and free radical generation can also act as potent immunogens and antigens.

In these ways, toxic chemicals not only damage the delicately balanced immune system but also tax the damaged system to its utmost.

### 3. WHY ARE WE JUST BEGINNING TO BECOME AWARE OF THIS PROBLEM?

INCREASED AWARENESS. With the increasing knowledge of the basic biochemical mechanisms of the immune system, we are beginning to develop an understanding that many diseases whose etiologies were previously unknown (e.g., heart disease, hypertension, schizophrenia) are immunologically mediated.

#### CHANGING POPULATION.

a. We are now living with the first and second generation of individuals who previously wouldn't have survived without antibiotics. I like to tell the medical students that the average American today is genetically different from the average American of 1970.

b. With the birth control pill and the change in sexual practices, as well as the rise in homosexuality, coupled with jet air travel, the manner in which we transmit viruses, parasites, and bacteria is markedly different from a decade ago. We now see large scale epidemics caused by organisms which we didn't know existed 10 years ago. New diseases are being discovered regularly.

c. The wide spread use of prescription, over-the-counter, and illicit drugs has made the American population the highest drug consuming society in history. Many, if not most, of these drugs have profound effects on the delicate immune system.

d. The massive increase in our exposure to chemicals, both natural and synthetic. The question is often asked, "How can formaldehyde or ammonia be harmful when these are natural chemicals which our ancestors confronted for thousands of years?". Cavemen and cavewomen confronted these chemicals and their ancestors evolved biochemical scavenger systems to protect them from damage caused by chemically altered cells and proteins. We, however, are exposed to many orders of magnitude-higher



concentrations of these natural chemicals than were our ancestors. Add to this the fact that we are being exposed to massive amounts of synthetic chemicals to which our ancestors were never exposed, and it is easy to see that we are taxing our protective resources to the utmost.

#### 4. HOW IS THE DIAGNOSIS OF CHEMICALLY INDUCED IMMUNE DYSREGULATION MADE?

The diagnosis is made by history, physical examination, and laboratory tests.

**HISTORY:** The typical chief complaint is the acquired intolerance to cigarette smoke, alcoholic beverages, and perfumes. When questioned further, the patient often complains of hair loss, headaches, skin rashes, mood swings, arthralgias, decreased libido and fatigue.

**PAST MEDICAL HISTORY:** The past medical history often reveals allergies which have become more or less intense after the exposure, indicating a change in the immune status of the individual. History also includes arthralgias, skin disorders, and possibly past surgeries for undefined pain syndromes.

**FAMILY HISTORY:** The family history almost always shows autoimmune disease, cancer, and/or mental illness.

**LABORATORY TESTS:** Laboratory tests usually show the stigmata of immune dysregulation and immune complex mediated complement consuming processes similar to the disease systemic lupus erythematosus. Alterations include alterations in total T cells, total B cells, total Helper/Inducer T cells, total Cytotoxic/Suppressor cells, altered helper/suppressor ratios, changes in complement components, and changes in the biochemical markers of inflammation such as the prostaglandins.

#### HOW DO DOCTORS KNOW WHEN SOMEBODY HAS BEEN INJURED BY CHEMICALS?

- a. We know these chemicals can cause immune alterations.
- b. We know the patients's symptoms are consistent with the diagnosis of chemically induced immune dysregulation.
- c. The patient's blood tests demonstrate immune dysregulation.
- d. There is a temporal association of the onset of symptoms of chemically induced immune dysregulation and the exposure to the chemicals in question.

#### 5. HOW IS THE DISEASE TREATED?

The best treatment is avoiding the chemicals. Specific antigen immunotherapy (ordinary allergy treatment for dust, grass pollens, molds, tree pollens, and weed pollens), can be instituted to take the pressure off the damaged immune system. Fortunately, this treatment is not often necessary. In refractory cases, non-specific immunotherapy with thymosin, transfer factor, interferon, and/or gammaglobulin is indicated.

## 6. HOW CAN THE DISEASE BE PREVENTED?

This is the most important and simplest aspect of this problem. First, and foremost, we must recognize the disease exists. That it is a reality and that it is preventable. Adequate ventilation of the plants (factories), appropriate protective clothing and respirators, coupled with appropriate waste disposal techniques will avoid contamination of workers and others with toxic chemicals and the spread of the problem.

## 7. GENERAL CONSIDERATIONS.

- OSHA standards are only helpful guides. They measure the acute toxic effects of one and only one chemical on a healthy adult male volunteer.
- They do NOT measure the chronic effect of that exposure on that subject.
- They do NOT measure the cumulative effect of multiple exposures of that chemical on that subject.
- They do NOT measure the effect of acute, chronic, cumulative, or interactive effects of that or any other chemical on healthy females, pregnant females, males and females with chronic diseases, males or females with family histories of chronic diseases, or children.

OSHA STANDARDS ARE THEREFORE ONLY HELPFUL GUIDES AND MUST IN NO WAY BE CONSIDERED STANDARDS FOR SAFETY!

Let me add here that it would be absolutely impossible for anybody, let alone OSHA, to appropriately measure the toxic effects of all chemicals on all people. What, then, is the solution? COMMON SENSE!

First try not to hurt anybody. Provide adequate ventilation, respirators, waste disposal, and medical screening to avoid toxic exposures. Second, if you do hurt somebody, say you're sorry and compensate him (or her) for his (or her) injury. Then, alter your systems so that no one else gets hurt. Lastly, we must recognize that these people are genuinely made ill by these chemicals. We must then ask, are these people just different in that they are more vulnerable - or are they the "canaries" of our society? ARE WE THE NEXT TO GO?

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## BOOK REVIEWS

ANTIOXIDANT ADAPTATION: Its Role in Free Radical Pathology.  
by Stephen A. Levine, Ph.D. and Parris M. Kidd, Ph.D.

Reviewed by Abram Hoffer, M.D., Ph.D.

The best books are not only good, they are timely. This book written twenty years ago would have been imcomprehensible because there were very few physicians aware of, and interested in allergies, in chemical sensitivities and in a large number of stressful diseases. Today, most people have heard of these reactions which have been called the "Twentieth Century Disease". In this book Levine and Kidd examine a large number of factors which are involved in these reactions and derive from them a unifying hypothesis they call antioxidant adaptation.

Dr. Levine became interested because he was almost totally incapacitated for over three years. He was forced to live in a wooden shack away from all chemicals for over three months. He began to eat Pacific kelp (rich in selenium), and slowly recovered. Fortunately, doctors are not immune to illness which draws their attention. Many clinical ecologists were seriously ill for years and had to heal themselves when no one else could. In this book Levine and Kidd answer two very important questions: (1). Why does one become ill from exposure to a large variety of chemicals, foods, radiations, etc.? (2). Why do antioxidants (selenium is only one of a large number of natural orthomolecular antioxidants) help?

This book is not a clinical book but has enormous clinical application. It is their hypothesis that compounds or factors to which we become sensitive, allergic, toxic, increase the formation of free radicals. These are very reactive and rapidly attack other chemicals, cell surfaces and so on, interfering with their normal properties. Life depends upon the combination of oxygen with food to release energy. Ideally, there would be no loss of oxygen, no waste by diversion to useless free radicals. The body protects itself by having available a large number of antioxidants either derived from food (Vitamin E, Vitamin C, selenium), or made in the body (melanin, scavenger molecules, uric acid, glutathione, etc.). Ideally, every extra free radical would be rapidly immobilized by one or another of the antioxidants. When there is excessive oxidation and a deficiency of antioxidants, the excess free radicals are free to create havoc in the body. They are involved in aging, immune diseases, cancer and, of course, in chemical sensitivities and allergies.

Free radicals are described giving exact chemical detail. When free radicals are formed they tend to propagate freely. Our bodies defend themselves in a four-stage adaptation according to Levine and Kidd.

In stage one we are healthy but are exposed to a barrage of chemicals in air, water, soil and food. Gradually our defences

are overwhelmed and we are at stage two - adaptation to oxidative stress. In this stage we find it more difficult to stay well. We are more susceptible to infection, allergies to chemicals. We have less energy and cope less effectively to emotional stress.

In stage three disease is clearly evident and patients are clearly distressed by a variety of allergies and sensitivities. Autoimmune diseases are common. Many of my patients see me at this stage.

In stage four the rate of deterioration exceeds the rate of repair. It becomes more and more difficult to deal with environmental stresses. Exhaustion is very common. Now the stage is set up for progression to a final breakdown which may lead to cancer, rapid aging, serious autoimmune diseases and death.

A complex series of reactions become comprehensible when they are related to a simple, and I suspect accurate, hypothesis. It is no longer necessary to look for a specific treatment for every one of the thousands of chemicals which make us sick. Even reading medical journals makes some ill. My nose begins to drip when I read the current JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, even when I find the article interesting. Some chemical diffuses from the printed page and attacks my nose. A few general principles may be followed: First: reduce the oxidative load by removing pollutants from our environment. Secondly: increase the quantity of antioxidants available to the body by eating foods rich in antioxidants such as B carotene, Vitamin C, Vitamin E, selenium, etc.; and when this is not adequate use these nutrients in optimum doses. For some people these doses will have to be very high. Finally: specific measures may be needed such as desensitization, anti candida treatment and so on.

Levine and Kidd have outlined a useful hypothesis and presented it to their peers. Now it is up to us to follow these leads. I suspect the ideas described will be examined seriously by the medical research establishments pretty soon. I do not expect we will have to wait the usual forty years.

A. Hoffer, M.D., Ph.D.

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EDITOR'S NOTE: 'ANTIOXIDANT ADAPTATION' (367 pages) by S.A. Levine, Ph.D., and Parris M. Kidd, Ph.D., is scheduled to be used as a text book at the University of California at Berkeley in the fall of 1985. Dr. Hoffer's book review will appear in the 'Journal of Orthomolecular Psychiatry'. The book is currently available from Biocurrents Division, ALLERGY RESEARCH GROUP, 400 Preda Street, San Leandro, California, 94577. Our thanks to Karen Giammona for keeping us informed.

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THE ALLERGY SELF-HELP BOOK  
by Sharon Faelten and the Editors of 'PREVENTION' magazine

Reviewed by Mary Merlin Nelson

As a second generation 'Prevention' magazine reader and subscriber, I expected a lot when I heard Rodale Press was about to publish a book on allergies. As always, they didn't let me down. The book is out, and in a word, it's EXCELLENT.

Senior Editor, Sharon Faelten, and her fellow editors of 'Prevention' have put together a concise, thoroughly-researched and documented, well-laid-out, "user-friendly" book that's bound to be a best seller. As soon as I finished reading my copy, I ordered a second copy for my parents, loaned mine to a friend and began drafting a "request-for-permission-to-reprint" letter to Rodale Books. With luck, you'll be able to read excerpts in your December Quarterly.

The Allergy Self-Help Book is written in five parts.

Part I - Understanding Allergy.

Part II - Discovering Unsuspected Causes of Allergy.

Part III - What Your Doctor Can Do For You.

Part IV - Building Up Your Defenses.

Part V - Allergic Reactions From A to V.

Each part is broken down into chapters dealing with different aspects of the subject being discussed. For example, in Part IV - Building Up Your Defenses, the chapters are (12) Nutrition For Allergy Control, (13) Mind Over Allergy, (14) What to Do In An Allergic Emergency. In Part V, you'll learn that everything from acne, aggression, anxiety and asthma; to criminal behaviour, depression, fatigue, high blood pressure, migraine and muscle aches; nausea and schizophrenia, vaginitis and vertigo are among the health problems associated with allergy.

Among those who shared their expertise with Sharon Faelten, you'll find Iris Bell, M.D., Ph.D.; the late Benjamin Feingold, M.D.; Theron Randolph, M.D.; Dr. William J. Rea (Dallas); Doris Rapp, M.D.; and others well known in the field of environmental medicine.

Like 'Prevention' magazine, it's written for the layman to understand, but it will definately provide insight and enlightenment to the professional physician and pharmacist, environmentalist, "health nut", or advanced "student" of allergy, be s/he patient or practitioner.

The Allergy Self-Help Book is published by Rodale Books, and is available from Rodale Press, Inc., 33 East Minor Street, Emmaus, Pennsylvania, U.S.A. 18049. Check the bookshelves in your local health store (Vita-Health will surely have it in stock).

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## LOOKING BACK

### ALLERGY AND STRESS: IMPROVING THE BALANCE

by John K. Blair, M.D., F.R.C.P., Guelph, Ontario

Excerpts from a speech given to the Kitchener Branch of the Human Ecology Foundation of Canada, March 2, 1982 (Cambridge, Ontario), and first published in the H.E.F. Canada Quarterly, Fall 1982.

Some people distinguish allergy from stress. They say that some symptoms are due to stress, and other symptoms are due to allergy. The truth is that allergy and stress are the same thing. ALLERGY IS JUST ANOTHER FORM OF STRESS.

Dr. Hans Seyle of Montreal became famous for his research and writing on the subject of stress. He said that stress is the non-specific response of the body to any demand made upon it. A stressor, therefore, is something that makes a demand. A stressor can be some environmental factor: heat, cold, dust, mold, or some particular life situation. It can be a change in your life or environment. Perhaps there has been no external change, but your ideas or perceptions about things have changed. If your coping or adapting abilities are high, then you make adjustments without any symptoms. If you are not coping or adapting well to the change, you may develop some symptoms, and these could be anything from trouble sleeping to diarrhea. If your mother-in-law plans to move into the house next to yours, for example, you may perceive this as a threat, and your own perception of the situation results in stress. If you do not feel your mother-in-law's move to be threatening, then there is nothing to cope with or adapt to, and there is no stress. STRESS IS YOUR BODY'S ATTEMPT TO COPE WITH OR ADAPT TO A SITUATION THAT YOU FEEL IS THREATENING.

The same concepts can be applied to allergies. If you think of every food and chemical as threatening; if you keep looking for more and more things that you can react to; if you keep making this threatening list longer and longer; then you are automatically putting yourself through a lot of extra stress. There can never be any end to this type of search. The more you look, the more things you will find. In fact, this very search in itself can increase our sensitivity and susceptibility to everything, and our list grows. Therefore, your own imagination can work for you or against you. ALLERGY IS JUST ANOTHER FORM OF STRESS. Each problem tends to throw us off balance a little or a lot, and our job is to try and find ways of coping with or adapting to these demands that are being made upon us.

Can you avoid everything that you are allergic to? Sometimes you can. Sometimes you are just allergic to a few things, and it is not hard to stay away from them. Sometimes, however, there are

just too many troublesome substances, and it is impossible to avoid them all. What can you do then? You can't just keep withdrawing from things. If you choose this method, there is no end to the withdrawal: food, friends, social activity, cities, cars, traffic; perhaps life itself. THE REAL ANSWER IS TO BUILD UP YOUR COPING-ADAPTING ABILITY, AND GET EVERYTHING BACK INTO BALANCE AGAIN. What do I mean by "the body's being in balance"?

BALANCE means stability, resistance, ability to adjust to changes. The mind and body work together as a unit to keep everything in balance. There has to be co-ordinated activity between the various organs, circulation, breathing, energy supply and transfer, temperature and elimination. Much of this co-ordination is centered in the more primitive parts of our brain which control our AUTONOMIC or vegetative NERVOUS SYSTEM. The SYMPATHETIC and PARASYMPATHETIC nervous systems sometimes work in opposite ways to control the diameter of our airways, the diameter of our blood vessels, and the distribution of blood flow to various areas. (Refer to Vol. VII, No. 1, H.E.F. Canada Quarterly, March 1985, pages 31 to 35, 'KNOW YOUR BODY') These areas of the brain also control the output of and the balance of hormones from the pituitary, thyroid and adrenal glands. This entire system, with its nerve impulses and hormones, is known as the NEUROENDOCRINE SYSTEM, and helps to keep everything in balance. The area of balance of particular importance in allergy and ecology is the immune system.

Our IMMUNE SYSTEM is supposed to identify and react to all foreign substances. Whenever anything is identified as foreign, the immune system is supposed to start a chain of events to protect us from this foreign material. It is a system trained to react to everything. Another function of the immune system is to suppress all these reactions. There are specialized lymphocytes or blood cells that are called SUPPRESSOR CELLS and there are others called HELPER CELLS. The helper cells help you have reactions and the suppressor cells stop these reactions. When you are well, everything is in perfect balance - you react against any true threat, like live bacteria or viruses that get into your system, and when the threat is over, the reaction stops. If your immune suppressor system is not working well, then you can start reacting to everything. You can react to your own tissues, such as your thyroid gland, and develop either an overactive or underactive gland. You can react to your own stomach lining cells that are supposed to help you absorb vitamin B12. You can react to your blood cells and develop anemia. You can react to all manner of foods and chemicals.

The mechanism by which the immune system gets out of balance is not well understood. Definite nutritional factors have been proven to exist, but it also makes sense to me that every single step one takes mentally and physically helps to restore the balance. Some steps are small, and by themselves are not significant; but all the small steps taken together can eventually make a big difference and help restore balance.

THE MOST IMPORTANT FACTOR FOR BALANCE IS MENTAL ATTITUDE. If you are constantly picturing yourself as a sick person, then this will become a barrier to getting healthy again. SELF-IMAGE IS A FACTOR: do you like yourself? It is hard to get well and stay well if you do not like yourself. There is a growing interest in the concept of "PSYCHO-IMMUNOLOGY". The body's immune system is influenced by mental ideas and attitudes. Positive images of healing and of the body's repairing itself have been reported useful in the treatment of cancer.

Your attitudes about things may not be obvious. Sometimes you have to ask yourself, "Do I want to be well? Perhaps I have been sick for a long time, and my family and friends are used to me like this; they do not make as many demands on me, I don't have to socialize as much; therefore, do I really want to be well?" Another question is, "How well do I want to be? Do I want to get a few symptoms settled down without changing or correcting very much, or do I want to build up my reserve of health with increased resistance? How well do I want to be?"

The third question is, "How hard am I prepared to work for better health? Am I prepared to reduce some of my stressors, or adjust my stress load, and take some of the pressure off? Am I carrying around a lot of resentment and grudges about my work or family that are putting me through a lot more stress? Am I prepared to reduce, eliminate or rotate some of my foods that are a bit too hard on my system? Will I stop smoking, make some changes in my lifestyle, make some of my goals a little more realistic? How well do I want to be, and how hard am I prepared to work on it?" YOUR OWN ATTITUDES, CONSCIOUS AND UNCONSCIOUS, ALL INFLUENCE THE STATE OF YOUR HEALTH.

Another method of improving the balance is treating the various allergens - especially the inhalants: dust, mold, pollens. Treatment of these inhalant allergies by the conventional build-up method or by determination of the neutralizing dose, reduces the body's reaction to these. Less demand is placed on the body to cope with these inhalants, and there is therefore less stress. With more or less success, food and chemical problems can also be treated by sublingual drops or by injection. Avoidance or limitation of exposure is the preferred method for inhalants, chemicals and foods, but treatment (especially for the inhalants) is often necessary.

I would briefly like to mention some general factors which are also very important for balance. Adequate rest is necessary. No one can cope or adapt as well when overtired. A balance between exercise and rest, work and relaxation, is necessary. We also need various goals to motivate us. We need things to look forward to tomorrow, next week, next year; if we are going to cope well with everything. These goals have to be realistic or they have a detrimental, discouraging effect. We should not take ourselves too seriously. A SENSE OF HUMOUR CAN MAKE THE DIFFERENCE BETWEEN BEING WELL OR BEING SICK. Many people have benefited from psychotherapy, relaxation techniques, meditation,



and biofeedback.

How long does it take to get well again, to get everything back into balance? The longer you have been ill, the more complex your allergies, the longer it will take. Sometimes you just have to keep working at it. PATIENCE AND PERSISTENCE ARE THE KEY WORDS. You have to have a plan, some strategy to follow. You don't want to change everything all at once, or you will get even more out of balance. You don't want to change things unnecessarily. Where do you start?

Change the easy things first. Worry first about things that you have some control over. Don't worry about the formaldehyde insulation if you are still smoking and wearing lots of perfume. How far do you go with all these changes? You go as far as necessary to allow your body to start improving and to get back in balance.

Let me repeat that allergy is just another form of stress. Demands are being made on us all the time; for coping, adapting, making adjustments. Without some stress, life would be dull and there would be no opportunity to grow and improve ourselves. The key is learning to keep in balance by every possible method you can use. We can all do our best to make this world a little safer for each other and for future generations, but in the meantime, as individuals, all we can do is try and keep adapted to this world as well as possible. There were safer times in history as far as air, food and water are concerned, but there is no other period in history quite as exciting as the present. The best time to be on earth is right now. We have to make the best of it, and we have to adapt to this world. ADAPT OR MALADAPT, OFTEN THE CHOICE IS OURS.

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# THE PATIENT'S PERSPECTIVE

## DAIRY PRODUCTS AND LACTASE

by Walter W. Hammant

Dairy products: milk, butter, cheese, ice cream, etc. The perfect food - rich in proteins, vitamins and minerals? The problem is that some persons suffer nausea, stomach cramps, gas pains and diarrhea because of their inability to normally digest these foods. The explanation is that these persons produce an insufficient amount of lactase in their digestive systems. Lactase is an enzyme which breaks down the lactose or milk sugar.

Lactase is produced in the second segment of the small intestine called the jejunum. Here the lactase enzyme latches on to the lactose and splits it into two components, glucose and galactose, which is then absorbed into the blood and is then further processed in the liver. Now, if insufficient lactase is produced by the jejunum, then the milk sugar or lactose continues through the intestines into the colon, where it is fermented by bacterial action, thus producing acids and carbon dioxide, which in turn produce an uncomfortable bloated feeling, cramps, and a watery explosive diarrhea.

Some people (and some ethnic groups) do not inherit the ability to produce sufficient lactase, and some do. This is the reason why powdered milk in the Third World countries is such a problem. Normally, babies produce sufficient lactase to process mother's milk, but at the age of three, this ability to produce lactase lessens to the point that it may become a problem then or later in life.

The answer is to lessen or omit dairy products to the extent that the problem disappears. Polyunsaturated margarine should be substituted for butter. The further advantage of this control is that it lessens the cholesterol count.

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EDITOR'S NOTE: The following ingredients are permissible in the manufacture of margarine: skim milk powder or buttermilk powder, whey solids or modified whey solids, food color, flavoring agents and sweetening agents, salt and potassium chloride, mono and diglycerides, lecithin, sorbitan tristearate, sorbic and benzoic acids, butylated hydroxyanisole, butylated hydroxytoluene and propyl gallate, ascorbyl palmitate and stearate (either/and), monoglyceride citrate, citric and lactic acids, etc. Chemically sensitive people may NOT find this "plastic or fluid emulsion" a suitable substitute for butter, and in fact may react severely.

\* \* \* \* \*

After being diagnosed as environmentally sensitive to nearly everything in my environment, I reluctantly withdrew from University and began living the typical life of an ecologically ill individual. I followed the rotation diet of organic foods, took supplements and drops, avoided all chemicals, and remained at home most of the time beside an air filter. I was experiencing little improvement with any of these methods.

Then I heard from a friend about reflexology. I had already tried acupuncture without much success and assumed this was similar. However, I was desperate so I made an appointment to give it a try. I reminded myself that, although it sounded unorthodox, ecological illness itself is considered unorthodox in many circles. Certainly an uncommon treatment might help an uncommon ailment.

Reflexology is actually an ancient science that involves the stimulation of certain points, on the feet especially, that correspond to organs and glands in the body. The feet are the primary focus because here the nerves from all parts of the body are concentrated. A reflexologist massages the feet with his hands or metal and wooden instruments. A fifteen minute treatment once a week is all that is necessary to see results.

After having my feet "worked over" I immediately felt worse. Within a couple of weeks, however, I was better than ever before. Within a month I no longer needed to be so strict with my diet, and within two months I was out and around and had discontinued my drops. I am optimistic that my recovery will continue.

I'm not advocating reflexology as the ultimate answer to the problems of the allergic individual. Yet in all my reading on allergy, I've never even seen this technique mentioned. Speaking as one who knows from experience, it is definitely worth investigating. A word of caution to the squeamish: while American reflexologists believe in the slow and easy doctrine, their European counterparts are of the "no pain, no gain" philosophy. What this means is that if you find a European to work on your feet, you will be bawling before he is half through. It is definitely not comparable to a rub-down at the spa. However, results are achieved more quickly this way and if you are brave enough and not one to be embarrassed about the shedding of a few tears in the name of your health, then this may be the answer for you.

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EDITOR'S NOTE: As Dr. John Blair said, many people have benefited from psychotherapy, relaxation techniques, meditation, and biofeedback. Do whatever works for you, and keep trying!!

\* \* \* \* \*

We all have ways of getting through our bad days. We learn, through trial and error, how to relieve our own particular series of reactions. We repeat the Allergic Mantra: "This too shall pass", and we vow never to do whatever it is we did again (but don't always keep our promise). If you're having a bad day, perhaps one or all of these techniques will work for you, too.

Baking Soda Baths are "back to the womb" type therapy sessions. Run your bath hot and let the chlorine air out while you're readying yourself for a long soak. Find a book that's pleasant and easy to read (sometimes you'll read the same sentence fifty times and put it aside, but it's worth a try). Make a hot cup of tea (if you can drink it) and take it into the bath with you. Do not feel guilty about how good the water feels when you slide in to your chin and just lie there relaxing and thinking "Healing Thoughts". Close your eyes and enjoy the calm.

Vitamin B6 (pyridoxine) is a natural diuretic for those who, like me, have adverse reactions to pharmaceutical diuretics, and often suffer edema as an allergic symptom. I take from 100 to 500 mg (100 mg tablets spaced over the day, it's water-soluble and so it passes through your body and doesn't accumulate in tissues to cause toxicity). According to the CANADIAN JOURNAL OF HEALTH AND NUTRITION (Alive, Issue 56, 1984), B6 is a natural diuretic that is helpful for the relief of water retention, arthritis, nausea, edema, toxemia, nervousness, blood sugar problems, infections, hemorrhoids and a host of other ailments. According to HUMAN PHYSIOLOGY - MECHANISMS OF BODY FUNCTION (Vander/Sherman/Luciano) B6 catalyzes decarboxylation (removal of carbon dioxide from the brain chemicals) of levadopa to dopamine, and enhances the extracerebral metabolism of levadopa, so less levadopa is available for conversion to dopamine in the basal ganglia. Ask your doctor what that means.

After reading much of what Dr. Stephen A. Levine has written on the use of Vitamin E and selenium, Vitamin C and calcium/magnesium (dolomite), B complex, zinc, and other vitamin and mineral supplements, I tried his technique after a massive exposure to the deadly acrylic fibre (which usually puts me away completely for 48 hours or more) and was greatly rewarded by the easing of my symptoms. That, and a glass of soda water to which I've added a flat teaspoon of baking soda, has aided me on several occasions where accidental exposures were unavoidable.

Remain calm during asthma attacks, and on days when your brain is like a wet mashed turnip. Panic solves nothing. Sit with your feet in a basin of warm water and epsom salts and stare into space. Drink plenty of safe liquids and eat only foods known to be completely reaction-free. DO NOT INDULGE IN CRAVINGS OF ANY KIND when you're on the edge. Know your limits. Discipline will help you pass the crisis; lack of it can quickly take you from "mere crisis" to anaphylactic shock. You are NOT invincible.

Keep your sense of humour. If your brain isn't functioning, do all your menial tasks. My central vacuum system is a boon to both my dust allergy and my hyperactivity state. Sometimes I just vacuum for therapy. It beats basket weaving. If it's sciatica, migraine or arthritis that has me wishing the day would pass more quickly (and if my brain is functioning) I read or write letters, work on the Quarterly, or whatever. Find out what works for you, and share it with your fellow members.

\* \* \*

I ALWAYS SEEM TO  
THINK SOMETHING'S  
WRONG  
WITH ME...

I MUST BE A  
HYPOCHONDRIAC.

NONSENSE...

YOU ONLY THINK YOU'RE  
A HYPOCHONDRIAC.

*Always find  
a reason to  
smile... and  
share it.*

*"No one ever  
said it would  
be easy"*

*MMN*

YOU SHOULD BE ALL RIGHT  
... JUST AVOID THE  
ENVIRONMENT FOR  
AWHILE !!

**WARNING !**  
**My disposition changes  
without notice**

## W O R T H   R E P E A T I N G

### ON ANCIENT MEDICINE

HIPPOCRATES circa 400 B.C.

But there are certain persons who cannot readily change their diet with impunity; and if they make any alteration in it for one day, or even for part of a day, are greatly injured thereby. Such persons, provided they take dinner when it is not their wont, immediately become heavy and inactive, both in body and mind, and are weighed down with yawning, slumbering, and thirst; and if they take supper in addition, they are seized with flatulence, tormina, and diarrhoea, and to many this has been the commencement of a serious disease, when they have merely taken twice in a day the same food which they have been in the custom of taking once.

And thus, also, if one who has been accustomed to dine, and this rule agrees with him, should not dine at the accustomed hour, he will straightway feel great loss of strength, trembling, and want of spirits, the eyes of such a person will become more pallid, his urine thick and hot, his mouth bitter; his bowels will seem, as it were, to hang loose; he will suffer from vertigo, lowness of spirit, and inactivity - such are the effects; and if he should attempt to take at supper the same food which he was wont to partake of at dinner, it will appear insipid and he will not be able to take it off; and these things, passing downwards with tormina and rumbling, burn up his bowels; he experiences insomnolency or troubled and disturbed dreams; and to many of them these symptoms are the commencement of some disease.

\* \* \* \*

"One must be taught to suspect, for if one does not suspect, s/he does not test, and if s/he does not test, s/he does not know."

Dr. Herbert Rinkel

"The new source of power is not money in the hands of a few, but information in the hands of many."

John Naisbitt (MEGATRENDS)

"Not waiting until the damage is done, but preventing it - that will be the secret of success for allergy treatment. And if it will put us allergists out of a job, that's just fine."

Constanine J. Falliers, M.D.  
Editor - 'Journal of Asthma'

\* \* \* \*

ALLERGIC MANTRA: "THIS TOO SHALL PASS".

\* \* \* \*

# ECOLOGICAL ILLNESS AND THE LAW

## THE ENVIRONMENT IS MOVING

by Earon S. Davis, J.D., M.P.H., editor - Ecological Illness Law Report. (from The Environmental Forum, December 1984)

Public opinion pollsters in recent years have consistently recorded increased public awareness of, and strong concern over, air pollution, water pollution, and toxic chemical dumps. All the same, it may in the end be misleading to suggest a drastic change in American support for environmental protection since the first "Earth Day" in 1970. In truth, what has changed is not so much our support for environmental protection as our concept of the "environment" we are indeed protecting.

It is our very definition of "environment" that is changing; an evolving process which, moreso than slogans of activists on either side of the issue, carries our best hope for survival in an increasingly toxic world.

There have been three interesting changes in the "environment" since the current "environmental movement" began in the late 1960s. First, the environment is moving from the national parks and scenic areas to the neighbourhoods. Second, the environment is moving from the great outdoors and into our homes and workplaces. Third, the environment is moving from an engineering and legal focus to that of public health professionals and "victims" organizations. Of course, it is not the environment, but our perception of the environment that has changed. Even so, each of these three "movements" must be understood if we are to develop the perspectives and institutions necessary to tackle some of the most thorny socio/political/economic issues.

### PRESERVING WILD-LIFE OR HUMAN LIFE?

There can be little argument that the environmental movement of the 1970s was aimed largely at protecting "nature" from man's construction and development activities. Issues such as scenic preservation, the Army Corps of Engineers "channelization" of rivers and streams, and protecting endangered species were at the forefront of our efforts. Very few people were as concerned about human health hazards from toxic wastes, pesticides, and the like. The reason is obvious: The environmental movement began as a middle class movement aimed at protecting esthetic values and improving humankind's biblical "stewardship" over the plants and animals of the planet.

Another value blended with this "conservation" ethic during the turbulent years of the Viet Nam war: skepticism over the industrial and political "establishment" of the day and the desire for a return to "nature". Combining these two values, environmentalists saw a battle brewing between man and nature.

They decided to take the side of nature. However, a major flaw in this view has made it even more difficult for society to develop rational environmental policies. The battle was not "man against nature" but "man against man". We were not merely killing our forests and wildlife; we were endangering ourselves with chemicals of unknown toxicity.

Perhaps it is easier to understand how the early environmental movement failed to recognize the dangers of toxic chemicals on human health if one notes the names of some major environmental organizations: The Sierra Club, National Wildlife Federation, Natural Resources Defense Council, Environmental Defense Fund, etc. These organizations, with the exception of groups like the Environmental Defense Fund, Environmental Action Foundation, and Center for Science In The Public Interest, were largely middle class "conservation" groups. They did not generally focus on human health, and they had little staff expertise on such matters.

That reality by no means implies that these groups were inactive. Throughout the 70s there was a slow shift from almost exclusive concern about bald eagles, etc., to toxic chemicals/hazardous wastes. And, during this transition, a remarkable thing began to happen. Organized labor and urban organizations started becoming involved in "environmental" issues, and environmental groups more active in urban issues. "Environmentalists" no longer appeared to be just anti-big-business types out to shut down steel mills without regard to economic concerns of industry and workers. We began to hear about "worker's right to know" of toxic exposures in the workplace.

And we began hearing about "Love Canal"; toxic chemicals invading a working class community. Asbestos in the schools. Kepone. And "Agent Orange" and dioxin. The circle does close. But why did it take so long for the "environmental" movement to move into the neighbourhoods? Class and cultural differences are a major factor, but there is another overriding factor: psychological denial.

It is far easier to deal with potential destruction of snail darters than to confront the deaths of thousands of people from some obscure chemical that has made its way into the human environment. Bombarded with the knowledge that there are dangerous chemicals contaminating virtually every living molecule on the earth, most of us were not quite willing to admit these dangers to ourselves until the studies became so conclusive that we could no longer ignore the threat.

While our human nature to procrastinate may be understandable, it often turns out to be very costly in human health and lives. In this case, the human costs of decades of irresponsibility in the use of toxic chemicals are only now beginning to unfold.



#### POLLUTION MOVES INDOORS

A second change in the environment is that it has now moved indoors. While the "environment" originally was specifically confined to wilderness areas and national parks, it now has spread throughout every nook and cranny of the world. This is so notwithstanding a completely irrational governmental approach to the toxic chemical problem.

The very structure of the governmental approaches to environmental problems has tended to institutionalize the perception that people exist in certain separate compartments (ie Outdoors = Occupational Safety and Health Administration (OSHA) ; travelling = FAA, ICC, etc.; residential = local housing codes, Department of Housing and Urban Development, Department of Energy; commercial = local laws; foods = Food and Drug Administration (FDA); conservation of wildlife = Department of the Interior; indoor pollution = who cares?), each of which must be regulated and controlled as autonomous units. The fact that we are exposed to many of the same chemicals in each of these "units", and that no body is really looking at the cumulative effects of all of these thousands of exposures, may be frightening. But somehow it is not enough to force the "system" to change.

The irony is even greater given that "systems" theory, the tool for rationally approaching problems, literally became a science around the same time the environmental movement became powerful. Thus, the irrationality of the 1970s approach to chemical hazards is painfully apparent. We must decide, however, whether this fragmented, wasteful approach is, indeed, dictated by political "realities" or whether it results simply from our national lack of resolve and creativity in dealing with issues of human survival.

Such concerns aside, one of the major causes of the evolving perception that the "environment" is "wherever we are" is the development of sophisticated measuring and monitoring machinery. Such machinery is responsible for informing us that amounts and types of chemical contaminants we could not have known of 10 years ago are literally all around us. We can now detect more of these chemicals, and in smaller amounts, in our neighbourhoods, in our homes, in our own blood streams, our fat tissues, and in human breast milk.

Another factor in the "movement" of the environment is the tremendous number of people who have been made ill by contamination of their air, water, food, indoor air, etc. Some of this evolution we owe to our "energy crisis" and the lack of a system for rationally allocating our energy resources. This situation led to what in retrospect appears to have been a fanatical movement towards energy conservation, prompting many Americans to turn their homes into gas chambers by sealing up every crack and crevice, and by insulating their homes with a very dangerous and ubiquitous chemical, formaldehyde. One prototype for this environmental folly is the new, energy

→ efficient, hermetically sealed office building. Studies have shown that "energy-efficient" may not mean work-efficient, for related decreases in worker productivity and increases in absenteeism have been recorded.

Of course, many other major factors also have played a role in redefining our environment: Chemical spills (eg PCBs, PBBs) that have contaminated animal feed, thus entering into the human food chain; the use of steroids and antibiotics in cattle and chickens; lead contamination resulting from exposure to household dust, tin cans, and leaded gasoline. For whatever the reasons, people are becoming increasingly aware of the impacts that their "environment" can have upon their health.

Getting back to the discussion of federal regulatory agencies, it is interesting to note the names that have been used by national and state agencies dealing with "environmental" problems. The Environmental Protection Agency seems focused on protecting the environment, not people. A Department of Natural Resources seems to be more interested in protecting the forests and oil reserves, doesn't it? Perhaps, as the entire regulatory field undergoes a systematic restructuring, we will begin to see agencies such as the Toxic Chemical Victim Compensation Board, the Department of Environmental Health, or Department of Comprehensive Chemical Exposure Studies. The task has changed, and the names, too, must change.

#### THE ENVIRONMENT BECOMES MULTIDISCIPLINARY

A third major environmental change is that environment professionals increasingly are trained in human health. It has taken many painful years to evolve substantial specialty training programs in toxicology, epidemiology, and other areas of academic and clinical environmental health. And, there is a very long way to go. However, in understanding the nature of "environmental protection" in the 1970s it is critical to understand who was doing the protecting.

4 The people in charge of environmental protection agencies in the 70s were largely trained in fields other than health; engineering, law, etc. These disciplines, themselves, have tended to keep the environmental debate focused on technology and procedural requirements, rather than on human health. For example, it is easy to see an engineer running a Pollution Control Agency. "Pollution Control" connotes the use of technology to control pollutants that already have been generated by an industrial process.

You would not expect an agency with such an engineering focus to ask the more difficult question of whether the particular operation should be allowed to create a given level of pollution, given certain undefined risks. Rather, you would expect new devices to be required to reduce emissions. And that is generally what happened.

Similarly, one would expect an "environmental" or "natural resources" agency headed by an attorney to develop a series of procedural rules, setting forth requirements that only another attorney could understand. Witness NEPA, the National Environmental Policy Act, providing no substantive environmental protection, but setting forth procedures that must be followed before taking any major federal action affecting the environment.

Don't mistake these observations as a condemnation of the roles engineers and attorneys have played in the environmental arena. Rather, they are intended to point out some of the institutional "blind spots" that have contributed to the chemical contamination in which we currently find ourselves. One of these "blind spots" is the result of a "revolving door" between industry (and its law firms) and government. It is through this "door" that scientists, attorneys, and others flow to promotions, broader experience, and increased respectability. With industry funding the bulk of all research and legal work in the environmental health field, one would hope to find a large enough counterpart in the government and public interest community to afford job security for those who find and speak out about chemical hazards. As scientists and attorneys have found during the years of the Carter and Reagan federal hiring freezes and budget cuts, that protection does not exist.

#### FORGING AHEAD: TOWARDS AN ERA OF HUMAN ECOLOGY

The point here is not that things have gone "wrong" in the environmental movement. Rather, the point is to outline a concept by which a new and better approach to the human environment may evolve. Similar to the much overused term "holistic" medicine, we need an approach to the environment that involves the "whole person" and not merely segments of people depending upon when and where they work, how much time they spend indoors, and whether they live in an urban or rural area.

The chemical exposures with which we are confronted are not dependent upon such artificial boundaries as workplace, home, office, food, etc. It is time for us to "expand" our notion of the human environment and begin to investigate the larger social issue involving potentially serious health problems that may be related to the overall chemical "overload" facing our society. As wave after wave of chemical victims (eg Agent Orange vets, formaldehyde insulation victims, pesticide victims, toxic waste dump residents, numerous "high risk" groups, people with chemically induced immune disorders, etc.) emerge, it is crucial that we take a good hard look at the price that we, and future generations, may be paying for what we were told was "better living through chemistry".

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## EXCERPTS FROM THE ECOLOGICAL ILLNESS LAW REPORT

EILR subscriber wins first acrylonitrile cancer settlement. Edward J. Walters, Jr., Baton Rouge, Louisiana, reports what may be the first settlement in the U.S. for the causation of cancer by this highly toxic chemical, heavily used in the rubber industry. (Waldrop v. Vistron Corp., No. 224,985 (La.19th Judicial Dist.Ct.)). The amount of the settlement was \$796,000. (TRIAL, December 1984) Walters also has a case pending against manufacturers of acrylonitrile, butadiene, styrene, and including the manufacturers of the cigarettes and beer consumed by the decedent. (EILR Vol. 111 Nos. 1 & 2, January/April 1985)

Shooting incident helps convince ALJ of a Social Security Claimant's severe reactions to foods and chemicals. It is unusual for an administrative law judge to be presented with testimony that a claimant is disabled because, among other things, he may become violent after exposures to certain common substances. The potential for violence apparently caught the attention of the ALJ, who found nonexertional impairments requiring a chemically free workplace and diet. Disability granted. (EILR Vol. 111 Nos. 1 & 2, January/April 1985)

BHOPAL TRAGEDY CONTINUES (EILR Vol. 111, No. 3, May/June 1985)  
When a man-made or natural disaster hits, the public is understandably quite interested in finding out exactly what happened and why. However, after the bodies are counted and buried, and the hospitals and police slowly begin to return to "normal" a second phase of public awareness is entered. This aftermath, which may yield information equally as important, often fails to gain the attention it deserves. What about the living "victims"? How many lives are shattered, how many are altered by disabilities and various physical and emotional scars? A recent report in the AMERICAN MEDICAL NEWS gave estimates of from 5,000 to 50,000 people permanently and totally disabled by the incident. And what of the 3,000 plus women who were pregnant at the time of the disaster?

It appears that the Bhopal disaster may prove to have as dramatic an aftermath as the initial devastation. Even as the body count continues to rise, there have been reports of chronic illnesses resulting from the methyl isocyanate leak. The April 1, 1985 issue of Gershon Fishbein's ENVIRONMENTAL HEALTH LETTER quotes Dr. H.A. Insaf, a private practitioner in Bhopal (he trained in London), describing additional chemical victims. "They experience attacks of breathlessness, unrelated to exertion, with wheezing and coughing." Fishbein further prints that Dr. Insaf "speculated that exposure to the gas could have made individuals cross-sensitive to other irritants such as dust, pollen, and temperature change."

Such observations are potentially of great importance and must not be ignored. Hopefully, physicians and public officials from India and the U.S. will pay attention to the problems experienced by the "living victims" and take action to better understand the

health consequences of this type of chemical exposure. They may well find an abundance of "ecological illness" cases, just as Francis Silver, P.E. speaks of regarding the victims of chemical warfare during World War 1.

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EVER HEARD OF "TOXIC EPIDERMAL NECROLYSIS"? (EILR Vol. 111, No. 3, May/June 1985) If you are aware of any instances, case reports, lawsuits, etc. in which this condition has been caused by exposure to pesticides, such as the fumigant Chlorthalonil, or Daconil please inform EILR. Ms. Liza Prior is in need of further information linking pesticides to this condition, which caused her husband's death in 1982 after the 30 year old naval officer played a round of golf at the Army Navy Country Club in Arlington, Virginia. Toxic Epidermal Necrolysis is a condition in which rashes turn into blisters all over the body. Lt. Prior entered Bethesda Naval Hospital after the exposure, after his kidneys, lungs, liver and heart all failed as a result of the toxic epidermal necrolysis.

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MURDER TRIAL MAY BECOME A LEADING CHEMICAL CASE (EILR Vol. 111, No. 3, May/June 1985) Film Recovery Systems, Inc. operated a factory in a Chicago suburb. The company used a cyanide solution to recover silver from used x-ray film. However, the workers at the plant apparently were unaware of the dangers from the process and no precautions were taken by the plant owners. After one worker died from the cyanide exposure and several others were learned to have become seriously ill, an unprecedented criminal action was filed, accusing the owners of the company of murder. This case represents an incredible series of wanton and reckless actions and inactions that ended in tragedy for one of the company's non-english-speaking employees. The May 20, 1985 issue of THE NATIONAL LAW JOURNAL quotes one of the defense attorneys as warning, "If these defendants are convicted it would have far-reaching and, I would say, devastating effects about the way business is conducted in this country." Is that supposed to be a warning, or a glimmer of hope for our nation's workers? GUILTY VERDIT! As this issue of EILR goes to press, Judge Ronald Banks has found the three Film Recovery Systems executives guilty of murder, with minimum prison sentences of 20 years each. The precedent-setting verdicts are expected to be appealed.

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THE ECOLOGICAL ILLNESS LAW REPORT is published six times per year and its Editor is Earon S. Davis, J.D., M.P.H. For more information on the EILR, write Post Office Box 1796, Evanston, Illinois, U.S.A. 60204-1796. All articles and excerpts used in your H.E.F. Canada Quarterly are reprinted with permission.

## TOXIC CHEMICALS IN THE NEWS

On March 12, New York State put an emergency ban on CHLORDANE and ALDRIN, both essentially chlorinated hydrocarbons used against termites in Toronto. In Canada, chlordane is allowed for termite control, and for spraying on soils to kill Japanese beetles, white grubs and wire worms. Dr. David Axelrod, New York Commissioner of Health, wrote that "because of their demonstrated ability to attack sites within the central nervous system and hepatotoxicity (effect on the liver), I do not feel the continued use of these compounds can be justified while the regulatory process to ban them proceeds." Chlordane is effective for at least 20 years, because it forms a bond with the soil and stays there. Aldrin is allowed only for termite control. Only New York State has banned them entirely. (Toronto Star, 16 April)

Professor Frank LaBella, a toxicologist at the University of Manitoba, says too little research is being done on the negative effects of chemicals commonly used to control mosquitoes and increase crop yields, and warned that the advantages of the toxic chemicals should be measured against their unintended effects (which could include birth defects, mutation, contamination of well and ground water, and the creation of pesticide-resistant insects). Dr. LaBella said laboratory testing is unable to predict the damage caused by blanket pesticide spraying over Winnipeg, and that although over 500,000 people were reportedly incapacitated or killed worldwide in 1973 because of environmental toxins, adverse reactions by many others go unrecorded each year. The human body's metabolism breaks chemicals down differently than the metabolism of an animal, which in some cases results in a more severe reaction. Dr. LaBella is one of several environmentalists helping to prepare a submission for the Environment Canada hearings on toxic chemical management in the prairies. (Winnipeg Free Press, 12 May)

After the CBC TV program 'The Fifth Estate' broadcast an item about TETRACHLOROETHYLENE in the domestic water supply of three communities in the Maritimes (New Minas, N.S.; Fredericton, N.B.; and Amherst, N.S.), opposition parties criticized the Nova Scotia government for not warning them. Tetrachloroethylene is used in drycleaning, and U.S. studies have linked it to human kidney and liver damage, and to cancer in mice. The residents of the communities had not been previously informed about the presence of the chemical in their water. (Globe and Mail, 27 May)

A torn bag of dangerous pesticide, KING POTATO DUST, was left on a display shelf within reach of children at a Woolco Dept. Store in Winnipeg, despite the fact that a label on the product (which contains the poisonous chemicals SEVIN and ZINEBE) warns that it should be kept out of reach of children. Sevin is a product of METHYL ISOCYANATE. "Do not breath. Harmful if swallowed or inhaled. Avoid skin contact. Wash clothing thoroughly after handling", the label warning says; but a Free Press reporter found some of the pesticide had settled on other products a metre away, and packages were on a bottom shelf in a display across the

aisle from the toy department. Other pesticides and herbicides, many with screw-off caps, easy-to-open lids, and spray cans without safety caps were also located within easy reach of toddlers. The products warn of effects ranging from death and long-term damage to unconsciousness and convulsions. (Winnipeg Free Press, 27 May)

In Vancouver, the mothers of two boys who became sick after playing on a baseball field that city park staff had sprayed with the herbicide 2, 4-D, are angry that they were not told the park had been sprayed. One mother said she thought her 9 year old had "picked up a bug" when he became violently ill after playing in a field sprayed with the weed killer KILLEX, a chemical commonly used by private gardeners to kill broadleaf plants such as dandelions. Gray Jones, a researcher with The Society Promoting Environmental Protection said 2, 4-D can be dangerous up to three weeks after application, and that the society will make a submission to the parks board calling for a moratorium on the use of 2, 4-D. (Globe and Mail, 28 May)

A medical survey done by a team of psychiatrists, psychologists and social workers at a government outpatient clinic shows at least 361 survivors of the Bhopal METHYL ISOCYANATE gas leak are suffering from mental disorders, and most are women afflicted by depression and anxiety. Panic attacks are the most obvious symptoms, and the study found that 43% were suffering from neurotic depression, 36.3% from anxiety neurosis, and 8.9% from adjustment reaction. Experts from King George's Medical College of Lucknow, capital of Uttar Pradesh state, found that the Bhopal disaster caused mental problems "on a fairly wide scale". In the first two months after the clinic opened, 160 adults complained of mental or emotional problems. (Winnipeg Free Press, 4 June)

In June, Ontario's (former) Conservative government dismantled a branch of the Environment Ministry that was to have set acceptable standards for pollutants; despite the fact that it denied having such plans during the election campaign. The branch's demise was approved by the full cabinet. Branch members (and environmentalists) said they were shocked that the action came in the final week of the Conservative's 42-year reign in Ontario. (Globe and Mail, 14 June)

A pesticide plant fire burned out of control in Anaheim, Calif., spewing toxic fumes, injuring 9 people, and forcing 1,000 others to evacuate their homes and businesses in an eight block area. Among the chemicals stored at the plant were ORGANOPHOSPHATES, CARBAMATES, and METHYL BROMIDE. They are all poisons that could burn the skin and eyes, and be fatal if swallowed, inhaled or absorbed through the skin. (Winnipeg Free Press, 24 June)

**HAZARDOUS MATERIALS CONTROLS PROPOSED:** Under a second draft of a regulation released by Workplace Safety and Health Minister Gerard Lecuyer on July 3, employers will be required to list hazardous materials (including explosive, flammable, poisonous, corrosive and infectious substances) in their workplace and

develop methods to control exposure to them. The regulation will stress prevention of chronic illness from long-term exposure to toxic substances. "The whole purpose of it is to reinforce the right of workers to know what the hazards are in order to protect themselves", Lecuyer said. (Winnipeg Free Press, 3 July)

Manitobans were advised to check their refrigerators for long cellophane-wrapped (English) cucumbers imported from B.C., which may have been contaminated by the pesticide ALDECARB. The cucumbers made more than 125 Vancouver-area residents sick. The pesticide is not approved for use on cucumbers, and has caused vomiting, diarrhea, muscle spasms and dizziness. Meyer Greenhouses of Maple Ridge, B.C., could be charged under the federal Food and Drug Act for using a banned chemical and for distributing cucumbers that had a dangerous level of pesticide. (Winnipeg Free Press, 6 June)

Health officials in California and Oregon banned the sale of watermelons after discovering a pesticide wrongly used had made at least four dozen people ill after eating watermelons treated with the pesticide ALDECARB, sold under the brand name TEMIK. People eating food containing it become sick within a few minutes. (Globe and Mail, 6 July)

California watermelons containing a Union Carbide Co. pesticide were linked to illnesses among more than 200 people in B.C., and four U.S. states. California's food and agricultural director said his department has received word that the poisonings were caused by deliberate misuse of farm chemicals, not by pesticide residue from previous crops. The pesticide involved in the poisonings, ALDECARB, is banned for use on watermelons. It is made from METHYL ISOCYANATE. Some U.S. growers blamed Union Carbide for the contamination, saying the pesticide did not decompose in the soil as fast as they had been led to believe. (Globe and Mail, 9 July)

An Ontario Environment Ministry spokesman said the owner of a truck that spilled over 450 litres of PCBs across northwestern Ontario is facing more than \$1 million in lawsuits. The April spill was the largest of its kind in Ontario history, and will cost the province in excess of \$1 million by the time the cleanup is completed. The towns of Kenora and Dryden have also filed statements of claim against Kinetic Ecological Resources Group Ltd. of Edmonton. Ontario has slapped the company with nine pollution-related charges because of the spill. (Winnipeg Free Press, 29 July)

A truck with a faulty tank leaked an estimated 570 litres of TORDON 101 (TRIDON) along 90 km. of the Trans-Canada Highway in Manitoba, and at a provincial ferry crossing. The ferry service was forced to close for two days, and the incident has sparked an investigation by Transport Canada. The truck was stopped on the Canadian Forces Base in Shilo, 25 km. east of Brandon, when military police noticed the leak. "Tordon 101 is not considered an overly toxic chemical although it can cause irritation to the



skin and eyes." It contains 2, 4-D, picloram and alcohol. The driver of the tanker truck admitted he knew that he was leaking the herbicide but did not stop. Military police held the driver to be questioned by environmental officials. (Winnipeg Free Press, 22 July, and Globe and Mail, 24 July)

Men who have been cured of cancer by drug therapy, or who have had persistent exposure to certain toxic chemicals, may run an increased risk of siring children with birth defects, according to a new study reported in a recent issue of the British journal 'Nature'. Bernard Robaire and his colleagues at McGill University in Montreal, provided the first direct evidence of such a link. (Winnipeg Free Press, 24 July)

TOXIC SHOCK FORGOTTEN, BUT NOT GONE: Jane E. Brody of the N.Y. Times News Service, writes that although Toxic Shock Syndrome no longer makes headlines, every month 20 or 30 cases are reported to public health officials at the federal Centers for Disease Control in Atlanta. This number represents only about one-tenth of the actual toxic shock cases now occurring. Five years ago, more than 90% of the reported cases involved menstruating women (98% of whom used tampons). Today about 30% of the cases are non-menstrual cases that include children, men, and the elderly; men and women who have just undergone surgery, women who have just given birth or who use contraceptive sponges or diaphragms, and people with no apparent source of infection at all. Toxic Shock Syndrome does not respond to antibiotics commonly used in day-to-day medical practices. Researchers at Harvard Medical School recently identified two substances in tampons (the risk of T.S.S. still remains highest in menstruating women) that seem to enhance the ability of the culprit bacteria, Staphylococcus aureus, to produce toxin. One is polyester foam (used in Rely tampons which were taken off the market in September, 1980) and the second is polyacrylate rayon (taken off the market in April, 1985). Most tampons contain cotton and one or more synthetic materials, including viscose rayon and carboxymethyl-cellulose. Tampax (original, regular) is the only tampon made of 100% cotton. (Winnipeg Free Press, 6 August)

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EDITOR'S NOTE: Special thanks to my friend and assistant Bonnie Bisnett for her help in editing and compiling our News Reviews in this, and the two previous editions. We wish her well in her new job, and hope she'll keep the articles, pressclippings and (with luck) radio items coming from Toronto. And the rest of you out there, please send YOUR contributions to THE H.E.F. CANADA QUARTERLY, c/o Mary Merlin Nelson - Editor, 261 Campbell Street, Winnipeg, Manitoba, CANADA R3N 1B4.

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## EDITORIAL COMMENT

### AND THE GOOD NEWS IS:

On April 16, 1985, the CANADIAN SOCIETY FOR CLINICAL ECOLOGY AND ENVIRONMENTAL MEDICINE was officially incorporated. The executive will be familiar to H.E.F. Canada members, and I'm sure you're all as delighted as I am to know that the society plans to have ongoing educational courses for doctors and members of their staff, and will be sponsoring annual meetings for interested doctors and other professionals. BRAVO!

President: Dr. John G. MacLennan  
Vice-president: Dr. William H. van Hoogenhuize  
Secretary: Dr. Jozef J. Krop  
Treasurer: Dr. John K. Blair

As you know, the H.E.F. held its first ever Medical Symposium on April 13. We were pleased to see a four page report with speech excerpts from Doctors Blair, Rea, and Waickman in the Spring 1985 edition of 'Allergy Shot' (AIA's newsletter). More than 80 doctors were among those attending, and as a result of the interest expressed by many of them, Dr. MacLennan et al will be conducting courses in environmental medicine in Ontario. We can only hope doctors from all across Canada attend. The medical profession must soon catch up with the new research if we are to get anywhere. Traditional allergists/immunologists, the medical and pharmaceutical "establishments", and clinical ecologists are locked in debate; each has a different reason, each a different way to help or hinder our progress. A consensus of opinion seems to indicate it will be at least another decade before they overcome their differences. I don't know about you, but I can't wait for the debates to be settled, the research to be completed, the lawsuits to come to court, and the world to regain its sanity and clean up its environment. Ah well, it's only been 50 years or so since Dr. Theron Randolph pioneered the field of clinical ecology and environmental medicine, so what's the hurry?

As your September edition goes to press, we're still anxiously awaiting the Ontario Ministry of Health's Committee on Environmental Hypersensitivity Disorders report. We hear they were overwhelmed with submissions, and have been working diligently on the report in hopes of having it completed before the summer ends. The Thomson Report (so named for the committee chairman, Judge George M. Thomson) is a giant step toward the understanding and recognition of our illness, and the reality of chemical hypersensitivities and environmental allergies. We are anxious to see and review it. Perhaps for our December edition? If anyone out there sees news releases on the subject, please share them with your fellow members. KEEP YOUR H.E.F. QUARTERLY INFORMED!

Last (but far from least), you'll notice Alice Smith-Corona has been displaced and will now become my letter typewriter while I figure out how to get one of these! I was dragged kicking and

screaming into the computer age with this edition. I'd like to thank my Technical Advisor/Consultant Timothy Nelson, B.C.Sc. for his patience and perserverance, his constant support and open telephone line ("Help! What do I do now?"), his advice ("Calm down, mother.") and expertise, and (now that I know how friendly these things really are) for his refusal to take "NO" for an answer. Let's see now, I'll only need between three and eight thousand dollars to have one of these for my very own. Contributions are welcome. (CHORTLE)

Stay (at)tuned,

*Mary Merlin Nelson*

Mary Merlin Nelson



THE HUMAN ECOLOGY FOUNDATION OF CANADA INVITES NEW MEMBERS

If you'd like to join H.E.F. Canada, please fill in this form and send it to your nearest branch office. Although all current "official" branches are in the province of Ontario, we have interest groups in the whole world. WE ARE EVERYWHERE!

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